```
=> fil capl; d que 15; d que 18; d que l10; d que l12; d que l15; d que 144; d que 145
FILE 'CAPLUS' ENTERED AT 11:50:24 ON 28 MAY 2002
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FILE COVERS 1907 - 28 May 2002  VOL 136 ISS 22
FILE LAST UPDATED: 26 May 2002  (20020526/ED)
```

inventors

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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L5             0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU


L2           156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3            73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4          4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5             0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6          1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L8             1 SEA FILE=CAPLUS ABB=ON  L2 AND ((L3 OR L4 OR L5 OR L6))


L1            22 SEA FILE=CAPLUS ABB=ON  COLSTON B?/AU
L2           156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3            73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4          4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5             0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6          1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L7            13 SEA FILE=CAPLUS ABB=ON  L1 AND ((L2 OR L3 OR L4 OR L5 OR L6))
L9            10 SEA FILE=CAPLUS ABB=ON  L3 AND (L4 OR L6)
L10            6 SEA FILE=CAPLUS ABB=ON  L7 AND L9


L1            22 SEA FILE=CAPLUS ABB=ON  COLSTON B?/AU
L2           156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3            73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4          4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5             0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6          1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L11         1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L12            1 SEA FILE=CAPLUS ABB=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6) AND
                 L11
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L1          22 SEA FILE=CAPLUS ABB=ON  COLSTON B?/AU
L2         156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3          73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4        4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5           0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6        1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L13      37666 SEA FILE=CAPLUS ABB=ON  IMMUNOASSAY+OLD/CT
L14       2342 SEA FILE=CAPLUS ABB=ON  L13(L)FLUOR?
L15          2 SEA FILE=CAPLUS ABB=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6) AND
               L14


L1          22 SEA FILE=CAPLUS ABB=ON  COLSTON B?/AU
L2         156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3          73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4        4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5           0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6        1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L43        128 SEA FILE=CAPLUS ABB=ON  VENKATESWARAN K?/AU
L44          1 SEA FILE=CAPLUS ABB=ON  L43 AND ((L1 OR L2 OR L3 OR L4 OR L5
               OR L6))


L11       1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L13      37666 SEA FILE=CAPLUS ABB=ON  IMMUNOASSAY+OLD/CT
L14       2342 SEA FILE=CAPLUS ABB=ON  L13(L)FLUOR?
L43        128 SEA FILE=CAPLUS ABB=ON  VENKATESWARAN K?/AU
L45          1 SEA FILE=CAPLUS ABB=ON  L43 AND (L14 OR L11)


=> s l8 or l10 or l12 or l15 or l44 or l45
L199        12 L8 OR L10 OR L12 OR L15 OR L44 OR L45

=> fil wpids; d que 146; d que 153; fil medl; d que 180; d que 184
FILE 'WPIDS' ENTERED AT 11:50:52 ON 28 MAY 2002
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FILE LAST UPDATED: 24 MAY 2002              <20020524/UP>
MOST RECENT DERWENT UPDATE            200233   <200233/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX TOOLS OF THE
    TRADE USER GUIDE, PLEASE VISIT:
    http://www.derwent.com/data/stn3.pdf <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<
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L37           7 SEA FILE=WPIDS ABB=ON  COLSTON B?/AU
L38          30 SEA FILE=WPIDS ABB=ON  EVERETT M?/AU
L39           8 SEA FILE=WPIDS ABB=ON  MILANOVICH F?/AU
L40         729 SEA FILE=WPIDS ABB=ON  BROWN S?/AU
L41         430 SEA FILE=WPIDS ABB=ON  SIMON J?/AU
L42           5 SEA FILE=WPIDS ABB=ON  VENKATESWARAN K?/AU
L46           9 SEA FILE=WPIDS ABB=ON  (L37 AND ((L38 OR L39 OR L40 OR L41 OR
                L42))) OR (L38 AND ((L39 OR L40 OR L41 OR L42))) OR (L39 AND
                ((L40 OR L41 OR L42))) OR (L40 AND (L41 OR L42))


L37           7 SEA FILE=WPIDS ABB=ON  COLSTON B?/AU
L38          30 SEA FILE=WPIDS ABB=ON  EVERETT M?/AU
L39           8 SEA FILE=WPIDS ABB=ON  MILANOVICH F?/AU
L40         729 SEA FILE=WPIDS ABB=ON  BROWN S?/AU
L41         430 SEA FILE=WPIDS ABB=ON  SIMON J?/AU
L42           5 SEA FILE=WPIDS ABB=ON  VENKATESWARAN K?/AU
L49          35 SEA FILE=WPIDS ABB=ON  FLUOROIMMUNOASSAY#
L50          28 SEA FILE=WPIDS ABB=ON  FLUORO(A)(IMMUNOASSAY# OR IMMUNO
                ASSAY#)
L51         506 SEA FILE=WPIDS ABB=ON  (IMMUNOASSAY# OR IMMUNO ASSAY#)(5A)FLUOR
                ?
L53           0 SEA FILE=WPIDS ABB=ON  (L37 OR L38 OR L39 OR L40 OR L41 OR
                L42) AND (L49 OR L50 OR L51)


FILE 'MEDLINE' ENTERED AT 11:50:53 ON 28 MAY 2002

 FILE LAST UPDATED: 22 MAY 2002 (20020522/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week. A new current-awareness alert
 frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index. See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.


L73           4 SEA FILE=MEDLINE ABB=ON  COLSTON B?/AU
L74         211 SEA FILE=MEDLINE ABB=ON  EVERETT M?/AU
L75          11 SEA FILE=MEDLINE ABB=ON  MILANOVICH F?/AU
L76        3411 SEA FILE=MEDLINE ABB=ON  BROWN S?/AU
L77        1911 SEA FILE=MEDLINE ABB=ON  SIMON J?/AU
L78          33 SEA FILE=MEDLINE ABB=ON  VENKATESWARAN K?/AU
L80           5 SEA FILE=MEDLINE ABB=ON  (L73 AND (L74 OR L75 OR L76 OR L77 OR
                L78)) OR (L74 AND (L75 OR L76 OR L77 OR L78)) OR (L75 AND (L76
                OR L77 OR L78)) OR (L76 AND (L77 OR L78)) OR (L77 AND L78)
```

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L73           4 SEA FILE=MEDLINE ABB=ON  COLSTON B?/AU
L74         211 SEA FILE=MEDLINE ABB=ON  EVERETT M?/AU
L75          11 SEA FILE=MEDLINE ABB=ON  MILANOVICH F?/AU
L76        3411 SEA FILE=MEDLINE ABB=ON  BROWN S?/AU
L77        1911 SEA FILE=MEDLINE ABB=ON  SIMON J?/AU
L78          33 SEA FILE=MEDLINE ABB=ON  VENKATESWARAN K?/AU
L79       18498 SEA FILE=MEDLINE ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR
                SPHERE#) OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L82       78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L84           0 SEA FILE=MEDLINE ABB=ON  (L73 OR L74 OR L75 OR L76 OR L77 OR
                L78) AND L79 AND L82


=> fil embase; d que l116; d que l119;fil biotechno; d que l141; d que l133; d que l139
FILE 'EMBASE' ENTERED AT 11:51:16 ON 28 MAY 2002
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 FILE COVERS 1974 TO 23 May 2002 (20020523/ED)

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 substance identification.


L108        579 SEA FILE=EMBASE ABB=ON  FLUOROIMMUNOASSAY/CT
L110          3 SEA FILE=EMBASE ABB=ON  COLSTON B?/AU
L111        120 SEA FILE=EMBASE ABB=ON  EVERETT M?/AU
L112         11 SEA FILE=EMBASE ABB=ON  MILANOVICH F?/AU
L113       2653 SEA FILE=EMBASE ABB=ON  BROWN S?/AU
L114       1513 SEA FILE=EMBASE ABB=ON  SIMON J?/AU
L115         43 SEA FILE=EMBASE ABB=ON  VENKATESWARAN K?/AU
L116          0 SEA FILE=EMBASE ABB=ON  (L110 OR L111 OR L112 OR L113 OR L114
                OR L115) AND L108



L110          3 SEA FILE=EMBASE ABB=ON  COLSTON B?/AU
L111        120 SEA FILE=EMBASE ABB=ON  EVERETT M?/AU
L112         11 SEA FILE=EMBASE ABB=ON  MILANOVICH F?/AU
L113       2653 SEA FILE=EMBASE ABB=ON  BROWN S?/AU
L114       1513 SEA FILE=EMBASE ABB=ON  SIMON J?/AU
L115         43 SEA FILE=EMBASE ABB=ON  VENKATESWARAN K?/AU
L119          2 SEA FILE=EMBASE ABB=ON  (L110 AND (L111 OR L112 OR L113 OR
                L114 OR L115)) OR (L111 AND (L112 OR L113 OR L114 OR L115)) OR
                (L112 AND (L113 OR L114 OR L115)) OR (L113 AND (L114 OR L115))
                OR (L114 AND L115)


FILE 'BIOTECHNO' ENTERED AT 11:51:17 ON 28 MAY 2002
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FILE LAST UPDATED: 22 MAY 2002      <20020522/UP>
FILE COVERS 1980 TO DATE.

>>>  SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
     /CT AND BASIC INDEX  <<<


L134         19 SEA FILE=BIOTECHNO ABB=ON  EVERETT M?/AU
L135          3 SEA FILE=BIOTECHNO ABB=ON  MILANOVICH F?/AU
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L136        757 SEA FILE=BIOTECHNO ABB=ON  BROWN S?/AU
L137        330 SEA FILE=BIOTECHNO ABB=ON  SIMON J?/AU
L138         33 SEA FILE=BIOTECHNO ABB=ON  VENKATESWARAN K?/AU
L141          1 SEA FILE=BIOTECHNO ABB=ON  (L134 AND (L135 OR L136 OR L137 OR
                L138)) OR (L135 AND (L136 OR L137 OR L138)) OR (L136 AND (L137
                OR L138)) OR (L137 AND L138)


L133          0 SEA FILE=BIOTECHNO ABB=ON  COLSTON B?/AU


L131        577 SEA FILE=BIOTECHNO ABB=ON  FLUOROIMMUNOASSAY/CT
L134         19 SEA FILE=BIOTECHNO ABB=ON  EVERETT M?/AU
L135          3 SEA FILE=BIOTECHNO ABB=ON  MILANOVICH F?/AU
L136        757 SEA FILE=BIOTECHNO ABB=ON  BROWN S?/AU
L137        330 SEA FILE=BIOTECHNO ABB=ON  SIMON J?/AU
L138         33 SEA FILE=BIOTECHNO ABB=ON  VENKATESWARAN K?/AU
L139          0 SEA FILE=BIOTECHNO ABB=ON  (L134 OR L135 OR L136 OR L137 OR
                L138) AND L131

=> fil jic; d que l149; d que l151; d que l158; d que l159; fil scisearch; d que l186
FILE 'JICST-EPLUS' ENTERED AT 11:51:37 ON 28 MAY 2002
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FILE COVERS 1985 TO 28 MAY 2002 (20020528/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

L149          0 SEA FILE=JICST-EPLUS ABB=ON  COLSTON B?/AU


L151          0 SEA FILE=JICST-EPLUS ABB=ON  MILANOVICH F?/AU


L150          1 SEA FILE=JICST-EPLUS ABB=ON  EVERETT M?/AU
L152         21 SEA FILE=JICST-EPLUS ABB=ON  BROWN S?/AU
L153         10 SEA FILE=JICST-EPLUS ABB=ON  SIMON J?/AU
L154          7 SEA FILE=JICST-EPLUS ABB=ON  VENKATESWARAN K?/AU
L158          0 SEA FILE=JICST-EPLUS ABB=ON  (L150 AND (L152 OR L153 OR L154))
                OR (L152 AND (L153 OR L154)) OR (L153 AND L154)


L150          1 SEA FILE=JICST-EPLUS ABB=ON  EVERETT M?/AU
L152         21 SEA FILE=JICST-EPLUS ABB=ON  BROWN S?/AU
L153         10 SEA FILE=JICST-EPLUS ABB=ON  SIMON J?/AU
L154          7 SEA FILE=JICST-EPLUS ABB=ON  VENKATESWARAN K?/AU
L155         82 SEA FILE=JICST-EPLUS ABB=ON  FLUOROIMMUNOASSAY?
L156       8867 SEA FILE=JICST-EPLUS ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT

L157       2738 SEA FILE=JICST-EPLUS ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L159          0 SEA FILE=JICST-EPLUS ABB=ON  (L150 OR (L152 OR L153 OR L154))
                AND (L155 OR L156 OR L157)
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FILE 'SCISEARCH' ENTERED AT 11:51:37 ON 28 MAY 2002
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FILE COVERS 1974 TO 24 May 2002 (20020524/ED)


L175         905 SEA FILE=SCISEARCH ABB=ON  FLUOROIMMUNOASSAY? OR FLUORO(A)(IMMU
                 NOASSAY? OR IMMUNO ASSAY?)
L176        2083 SEA FILE=SCISEARCH ABB=ON  FLUOR?(5A)(IMMUNOASSAY? OR IMMUNO
                 ASSAY?)
L177          23 SEA FILE=SCISEARCH ABB=ON  COLSTON B?/AU
L178         278 SEA FILE=SCISEARCH ABB=ON  EVERETT M?/AU
L179          54 SEA FILE=SCISEARCH ABB=ON  MILANOVICH F?/AU
L180        5508 SEA FILE=SCISEARCH ABB=ON  BROWN S?/AU
L181        3071 SEA FILE=SCISEARCH ABB=ON  SIMON J?/AU
L182         123 SEA FILE=SCISEARCH ABB=ON  VENKATESWARAN K?/AU
L185        4283 SEA FILE=SCISEARCH ABB=ON  FLUORESC?(3A)ANTIBOD?
L186           4 SEA FILE=SCISEARCH ABB=ON  (L177 OR L178 OR L179 OR L180 OR
                 L181 OR L182) AND (L175 OR L176 OR L185)


=> dup rem l80,l199,l141,l119,l186,l46
FILE 'MEDLINE' ENTERED AT 11:52:24 ON 28 MAY 2002

FILE 'CAPLUS' ENTERED AT 11:52:24 ON 28 MAY 2002
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PROCESSING COMPLETED FOR L80
PROCESSING COMPLETED FOR L199
PROCESSING COMPLETED FOR L141
PROCESSING COMPLETED FOR L119
PROCESSING COMPLETED FOR L186
PROCESSING COMPLETED FOR L46
L200          27 DUP REM L80 L199 L141 L119 L186 L46 (6 DUPLICATES REMOVED)
                 ANSWERS '1-5' FROM FILE MEDLINE
                 ANSWERS '6-16' FROM FILE CAPLUS
                 ANSWERS '17-19' FROM FILE SCISEARCH
                 ANSWERS '20-27' FROM FILE WPIDS

=> d bib ab 1-16; d iall 17-19; d ibib ab 20-27

L200 ANSWER 1 OF 27     MEDLINE                          DUPLICATE 2
AN   2001461047     MEDLINE
DN   21396808   PubMed ID: 11506002
TI   Field-deployable sniffer for 2,4-dinitrotoluene detection.
AU   Albert K J; Myrick M L; Brown S B; James D L; Milanovich F
     P; Walt D R
CS   Department of Chemistry, Tufts University, Medford, Massachusetts 02155,
     USA.
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SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, (2001 Aug 1) 35 (15) 3193-200.
Journal code: 0213155. ISSN: 0013-936X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20010820
Last Updated on STN: 20020122
Entered Medline: 20011226
AB A field-deployable instrument has been developed to detect low-level 2,4-dinitrotoluene (2,4-DNT) vapors. The system is based on previously developed artificial nose technology and employs an array of sensory materials attached to the distal tips of an optical fiber bundle. Both semiselective and nonspecific, cross-reactive sensors were employed. Each sensor within the array responds differentially to vapor exposure so the array's fluorescence response patterns are unique for each analyte. The instrument is computationally "trained" to discriminate target response patterns from nontarget and background environments. This detection system has been applied to detect 2,4-DNT, an analyte commonly detected on the soil surface above buried 2,4,6-trinitrotoluene (TNT) land mines, in spiked soil and aqueous and ground samples. The system has been characterized and demonstrated the ability to detect 120 ppb 2,4-DNT vapor in blind (unknown) humidified samples during a supervised field test.

L200 ANSWER 2 OF 27 MEDLINE DUPLICATE 3
AN 1999446342 MEDLINE
DN 99446342 PubMed ID: 10517145
TI A minisonicator to rapidly disrupt bacterial spores for DNA analysis.
AU Belgrader P; Hansford D; Kovacs G T; **Venkateswaran K**; Mariella R Jr; **Milanovich F**; Nasarabadi S; Okuzumi M; Pourahmadi F; Northrup M A
CS Lawrence Livermore National Laboratory, Livermore, California 94551, USA.. belgrader@cepheid.com
SO ANALYTICAL CHEMISTRY, (1999 Oct 1) 71 (19) 4232-6.
Journal code: 4NR; 0370536. ISSN: 0003-2700.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200002
ED Entered STN: 20000209
Last Updated on STN: 20000209
Entered Medline: 20000201
AB Concerns about the use of anthrax spores as a weapon of mass destruction have motivated the development of portable instruments capable of detecting and monitoring a suspected release of the agent. Optimal detection of bacterial spores by PCR requires that the spores be disrupted to make the endogenous DNA available for amplification. The entire process of spore lysis, PCR, and detection can take several hours using conventional methods and instruments. In this report, a minisonicator and prototype spore lysis cartridge were built to disrupt Bacillus spores in 30 s for rapid, real-time PCR analysis. Utilization of the minisonicator improved PCR analysis by decreasing the limit of detection, reducing the time of detection, and increasing the signal amplitude. Total time of spore disruption and detection using the minisonicator and a microchip PCR instrument was less than 15 min.

L200 ANSWER 3 OF 27 MEDLINE
AN 2000232892 MEDLINE
DN 20232892 PubMed ID: 10770016
TI Optical coherence tomography: a new imaging technology for dentistry.
AU Otis L L; **Everett M J**; Sathyam U S; **Colston B W Jr**

CS Department of Oral Diagnosis, University of Connecticut School of Dental Medicine, Farmington 06030-1605, USA.
SO JOURNAL OF THE AMERICAN DENTAL ASSOCIATION, (2000 Apr) 131 (4) 511-4. Journal code: H5J; 7503060. ISSN: 0002-8177.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals; Priority Journals
EM 200004
ED Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000426
AB BACKGROUND: Optical coherence tomography, or OCT, is a new diagnostic imaging technique that has many potential dental applications. The authors present the first intraoral dental images made using this technology. METHODS: The authors constructed a prototype dental OCT system. This system creates cross-sectional images by quantifying the reflections of infrared light from dental structures interferometrically. RESULTS: We used our prototype system to make dental OTC images of healthy adults in a clinical setting. These OCT images depicted both hard and soft oral tissues at high resolution. CONCLUSIONS: OCT images exhibit microstructural detail that cannot be obtained with current imaging modalities. Using this new technology, visual recordings of periodontal tissue contour, secular depth and connective tissue attachment now are possible. The internal aspects and marginal adaptation of porcelain and composite restorations can be visualized. CLINICAL IMPLICATIONS: There are several advantages of OCT compared with conventional dental imaging. This new imaging technology is safe, versatile, inexpensive and readily adapted to a clinical dental environment.

L200 ANSWER 4 OF 27 MEDLINE
AN 2001132890 MEDLINE
DN 21074192 PubMed ID: 10808221
TI Dental optical coherence tomography: a comparison of two in vitro systems.
AU Otis L L; **Colston B W Jr; Everett M J;** Nathel H
CS University of Connecticut School of Dental Medicine, Department of Oral Diagnosis, 263 Farmington Avenue MC-1606, Farmington, CT 06030, USA.
SO DENTO-MAXILLO-FACIAL RADIOLOGY, (2000 Mar) 29 (2) 85-9. Journal code: E28; 7609576. ISSN: 0250-832X.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals
EM 200103
ED Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010301
AB OBJECTIVE: To compare the imaging results obtained with two different in vitro prototype dental optical coherence tomography (OCT) systems. METHODS: Two prototypes were evaluated: an 850 nm wavelength, 700 microW OCT system with a relatively low numerical aperture (0.03) and a 1310 nm wavelength, 140 microW system with a higher numerical aperture (0.20). RESULTS: Using the 850 nm system a characteristic scattering signal was observed that correlated with the depth of a periodontal probe. There was, however, insufficient light penetration to create images with adequate resolution. Improved image quality was achieved with the 1310 nm OCT system; these images had sufficient resolution to allow identification of anatomical structures important for the diagnostic assessment of oral structures. CONCLUSIONS: These results illustrate the improvement in imaging dental structures that can be obtained with a prototype 1310 nm OCT system. The feasibility of OCT as a dental imaging technique is verified.

L200 ANSWER 5 OF 27 MEDLINE
AN 2001048687 MEDLINE
DN 20406382 PubMed ID: 10949834
TI Imaging of the oral cavity using optical coherence tomography.
AU **Colston B W Jr**; **Everett M J**; Sathyam U S; DaSilva L B; Otis L L
CS Lawrence Livermore National Laboratory, Calif., USA.. Colston1@llnl.gov
SO MONOGRAPHS IN ORAL SCIENCE, (2000) 17 32-55. Ref: 32
Journal code: NIG; 0327545. ISSN: 0077-0892.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Dental Journals; Priority Journals
EM 200012
ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001214
AB Optical coherence tomography is a new method for noninvasively imaging internal tooth and soft tissue microstructure. The intensity of backscattered light is measured as a function of depth in the tissue. Low coherence interferometry is used to selectively remove the component of backscattered signal that has undergone multiple scattering events, resulting in very high resolution images (< 15 microns). Lateral scanning of the probe beam across the biological tissue is then used to generate a 2-D intensity plot, similar to ultrasound images. This imaging method provides information that is currently unobtainable by any other means, making possible such diverse applications as diagnosis of periodontal disease, caries detection, and evaluation of restoration integrity. This chapter presents an overview of this exciting new imaging technique and its current application to dental diagnosis.

L200 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 2001:582143 CAPLUS
DN 135:146393
TI Chemical sensor system utilizing microjet technology
IN **Brown, Steve B.**; **Colston, Billy W., Jr.**; Langry, Kevin; **Milanovich, Fred P.**; **Simon, Jonathan**; Cox, W. Royall; Hayes, Donald J.
PA Regents of the University of California, USA
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001057494	A2	20010809	WO 2001-US1553	20010117
	WO 2001057494	A3	20020404		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI	US 2000-177105P	P	20000120
	US 2000-709047	A	20001109

AB Microjet technol. is used to print one or more indicator chemistries on an optically accessible surface. Each indicator chem. contains one or more

light energy absorbing dye(s) whose optical characteristics change in response to the target ligand or analyte. By spectrally monitoring these changes using fluorescence and/or absorption spectroscopy, sensitive detection and/or quantitation of the target ligand or analyte can be obtained.

L200 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
AN 1985:74966 CAPLUS
DN 102:74966
TI Use of monoclonal antibodies in an epidemiological marker system: a retrospective study of lung specimens from the 1976 outbreak of Legionnaires disease in Philadelphia by indirect fluorescent-antibody and enzyme-linked immunosorbent assay methods
AU **Brown, Susan L.**; Bibb, William F.; McKinney, Roger M.
CS Div. Bacter. Dis., Cent. Infect. Dis., Atlanta, GA, 30333, USA
SO J. Clin. Microbiol. (1985), 21(1), 15-19
CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English
AB Autopsy specimens of lung tissues from 15 patients that contracted legionellosis during the 1976 Philadelphia outbreak of Legionnaires' disease were examd. for the presence of Legionella organisms and sol. antigens by indirect fluorescent-antibody (IFA) testing and by an ELISA with both polyclonal and monoclonal antibodies. In all 15 cases, at least one specimen was pos. for Legionella pneumophila serogroup 1 (Lp-1) antigens by a polyclonal antibody ELISA system. Of the 15 cases tested for Lp-1, 9 were pos. by a polyclonal antibody IFA test. Nine mouse monoclonal antibodies to Lp-1 gave essentially the same reactivity pattern with exts. from lung tissue homogenates as that obtained with a Philadelphia 1 culture ext. by using a monoclonal antibody ELISA system. The same monoclonal antibody panel gave similar results when used in the IFA system with tissue homogenates. Monoclonal antibodies can be used as epidemiol. marker systems with both IFA and ELISA testing. This study provides evidence that the 1976 common source outbreak in Philadelphia was probably caused by a single Lp-1 strain. ELISA testing of the sol. antigen of Lp-1 from lung tissue homogenate supernatants was more sensitive than IFA testing of the homogenates and should be extremely useful as either a primary test or as an adjunct to fluorescent antibody testing for legionellosis.

L200 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 2002:139553 CAPLUS
TI Optical fiber head for providing lateral viewing
IN **Everett, Matthew J.**; Colston, Billy W.; James, Dale L.; **Brown, Steve**; Da Silva, Luiz
PA The Regents of the University of California, USA
SO U.S. Pat. Appl. Publ.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002021866	A1	20020221	US 2001-883513	20010618
PRAI	US 2000-226165P	P	20000818		

AB The head of an optical fiber comprising the sensing probe of an optical heterodyne sensing device includes a planar surface that intersects the perpendicular to axial centerline of the fiber at a polishing angle .theta.. The planar surface is coated with a reflective material so that light traveling axially through the fiber is reflected transverse to the fiber's axial centerline, and is emitted laterally through the side of the fiber. Alternatively, the planar surface can be left uncoated. The polishing angle .theta. must be no greater than 39.degree. or must be at

least 51.degree.. The emitted light is reflected from adjacent biol. tissue, collected by the head, and then processed to provide real-time images of the tissue. The method for forming the planar surface includes shearing the end of the optical fiber and applying the reflective material before removing the buffer that circumscribes the cladding and the core.

L200 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 2000:493749 CAPLUS
DN 133:117149
TI An apparatus and method for the rapid spectral resolution of confocal images
IN Stimson, Michael J.; **Simon, John D.**
PA Duke University, USA
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000042417	A1	20000720	WO 1999-US30863	19991223
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6134002	A	20001017	US 1999-229874	19990114
	EP 1117987	A2	20010725	EP 1999-969290	19991223
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1999-229874	A	19990114		
	WO 1999-US30863	W	19991223		

AB A confocal scanning microscope app. and method is used to rapidly acquire spectrally resolved images. The confocal scanning microscope app. includes optics used to simultaneously acquire at least two points along a scan pattern on a sample plane of a sample, wherein the points include regions of the sample represented by at least two pixels. Confocal scanning beam microscopes are described which comprise a sample support; a sample illumination source; means for focusing the light from the source on a prescribed sample plane of the sample; means for scanning the light beam in a predetd. scan pattern on the sample plane; means for simultaneously acquiring .gtoreq.2 points of the predetd. scan pattern on the sample plane. wherein the points include a region of the sample represented by .gtoreq.2 image pixels; a detection arm placed in the path of the light reflected. scattered, or emitted from the region on the sample plane of the sample comprising means for resolving the spectra of the light from each region including a light receiving opening and a detector array placed behind the means for spectrally resolving the region; and means for focusing the light onto the light receiving opening. The detector array comprises means for detecting the image of the region and means for simultaneously detecting the spectra of the light of the region. The microscopes may by used a fluorescence microscopes (e.g., for fluorescence immunoassay). Methods for rapid acquisition of spectrally resolved confocal images entail the use of the microscopes are also described.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L200 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1999:478747 CAPLUS
TI A unique optical arrangement for obtaining spectrally resolved confocal images
AU Stimson, Michael J.; Haralampus-Grynaviski, Nicole; **Simon, John D.**
CS Department of Chemistry, Duke University, Durham, NC, 27708, USA
SO Rev. Sci. Instrum. (1999), 70(8), 3351-3354

CODEN: RSINAK; ISSN: 0034-6748
PB American Institute of Physics
DT Journal
LA English
AB The design for a confocal beam-scanning microscope with a unique optical configuration for the rapid acquisition of spectrally resolved images is presented. The novel aspect of the optical configuration is the location of the detection device, which is placed in an intermediate position between fully descanned detection and nondescanned detection (direct projection). This placement allows for the practical implementation of spectrally resolved confocal imaging. The device is demonstrated by the spectral resoln. of a sample of fluorescently labeled **microbeads**

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L200 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1998:344585 CAPLUS
DN 129:15313
TI Simultaneous human ABO and Rh(D) blood typing or antibody screening by flow cytometry
IN Vyas, Girish N.; **Venkateswaran, Kodumudi**
PA Regents of the University of California, USA
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9821593	A1	19980522	WO 1997-US19484	19971027
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5776711	A	19980707	US 1996-747558	19961112
AU 9871812	A1	19980603	AU 1998-71812	19971027
PRAI US 1996-747558		19961112		
WO 1997-US19484		19971027		

AB Flow cytometric methodol. is provided for simultaneous detn. of (1) ABO and Rh(D) typing of human red cells, (2) natural alloantibodies in plasma, and (3) screening for alloantibodies in plasma. The method includes (a) the use of fluorescent labeled antibodies to A, B and Rh(D) antigens to carry out (1); (b) different sized beads coated with blood group substances A and B to carry out (2); and (c) the differential fluorescent labeling of screening reagent red blood cells for flow cytometric analyses to carry out (3). The routine ABO and Rh(D) typing and antibody screening of human blood for both isoantibodies and alloantibodies can be detd. in three individual reactions compared to 7 to 10 tests currently performed in blood banks.

L200 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1995:353794 CAPLUS
DN 122:141845
TI A fiber-optic sensor system for monitoring chlorinated hydrocarbon pollutants
AU **Milanovich, F. P.; Brown, S. B.; Colston, B. W., Jr.**; Daley, P. F.; Langry, K. C.
CS Health Ecological Assessment Division, Lawrence Livermore National Lab.,

Livermore, CA, 94550, USA
SO Talanta (1994), 41(12), 2189-94
CODEN: TLNTA2; ISSN: 0039-9140
DT Journal
LA English
AB A fiber-optic chem. sensor system was developed and field-tested for environmental monitoring and remediation. The system detects chlorinated hydrocarbon pollutants with colorimetry, and is based on an irreversible chem. reaction between the target compd. and a specific reagent. The reaction products are detected by their absorption at 560 nm and can be monitored remotely with optical fibers. Continuous measurements are made possible by renewing the reagent from a reservoir with a miniature pumping system. The sensor was evaluated against gas chromatog. stds. and demonstrated accuracy and sensitivity (5 ppb) sufficient for the environmental monitoring of trichloroethylene and chloroform. Preliminary field tests were conducted in a variety of contamination monitoring scenarios.

L200 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1995:390684 CAPLUS
DN 123:101675
TI A fiber-optic sensor system for remote, long-term monitoring of soil and groundwater contamination
AU **Milanovich, Fred P.; Brown, Steve B.; Colston, Billy W. Jr.**; Daley, Paul F.
CS Environmental Science Division, Lawrence Livermore National Laboratory, Livermore, CA, 94550, USA
SO Proc. SPIE-Int. Soc. Opt. Eng. (1994), 2360(Tenth International Conference on Optical Fibre Sensors, 1994), 98-100
CODEN: PSISDG; ISSN: 0277-786X
DT Journal
LA English
AB The authors have developed a fiber-optic chem. sensor technol. for the remote monitoring of various volatile solvents. The accuracy, linearity, and sensitivity of the sensor (<5 ppb by wt. in H2O, detd. by comparison with std. gas chromatog. measurements) are sufficient for environmental monitoring of at least trichloroethylene (TCE) and CHCl3. The sensor was successfully demonstrated in a variety of remediation related activities. The authors will present design parameters of the sensor and field test results. Work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Lab. under Contract W-7405-Eng-48.

L200 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1995:849811 CAPLUS
DN 123:349613
TI A new fiber optic sensor technology for rapid and economical determination of soil contamination
AU **Milanovich, Fred P.; Brown, Steve B.; Colston, Billy W., Jr.**; Daley, Paul F.
CS Lawrence Livermore National Laboratory, Livermore, CA, 94550, USA
SO Altlastensanierung 93, Int. KfK/TNO Kongr., 4th (1993), Volume 2, 1639-43. Editor(s): Arendt, Friedrich. Publisher: Bundesminist. Forsch. Technol., Bonn, Germany.
CODEN: 61NFAR
DT Conference
LA German
AB A probe for the in situ detn. of trichloroethylene and chloroform in groundwater in the unsatd. zone is described.

L200 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1994:61798 CAPLUS
DN 120:61798
TI Penetrometer compatible, fiber optic sensor for continuous monitoring of

chlorinated hydrocarbons - field test results
AU **Milanovich, Fred P.; Brown, Steve B.; Colston, Billy W., Jr.**
CS Environ. Sci. Div., Lawrence Livermore Natl. Lab., Livermore, CA, 94550, USA
SO Proc. - Electrochem. Soc. (1993), 93-7(Proceedings of the Symposium on Chemical Sensors II, 1993), 643-9
CODEN: PESODO; ISSN: 0161-6374
DT Journal
LA English
AB A fiber optic chem. sensor for use in environmental monitoring and remediation is described. The principle of detection is colorimetric and is based on an irreversible chem. reaction between a specific reagent and the target compd. The formation of reaction products are monitored remotely with optical fibers. Successive or on-demand measurements are made possible with a reagent reservoir and a miniature pumping system. The sensor has been evaluated against gas chromatog. stds. and has demonstrated accuracy and sensitivity (>5 ppb wt./wt.) sufficient for the environmental monitoring of the contaminants trichloroethlyene and chloroform. The sensor system can be used for bench-top analyses or for in-situ measurements such as groundwater and vadose monitoring wells or in penetrometry mediated placements.

L200 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2002 ACS
AN 1992:476071 CAPLUS
DN 117:76071
TI Fiber optic sensor for continuous monitoring of chlorinated solvents in the vadose zone and in groundwater: field test results
AU Daley, P. F.; **Colston, B. W., Jr.**; **Brown, S. B.**; Langry, K.; **Milanovich, F. P.**
CS Environ. Restorat. Div., Lawrence Livermore Natl. Lab., Livermore, CA, 94550, USA
SO Proc. SPIE-Int. Soc. Opt. Eng. (1992), 1587(Chem., Biochem., Environ. Fiber Sens. 3), 278-82
CODEN: PSISDG; ISSN: 0277-786X
DT Journal
LA English
AB A fiber optic chem. sensor designed for groundwater and vadose zone monitoring of volatile halogenated hydrocarbons, uses an irreversible chem. reaction that forms visible light absorbing products is described. The absorption is measured remotely. Calibration data and field test results for trichloroethylene are presented.

L200 ANSWER 17 OF 27 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 1998:891714 SCISEARCH
THE GENUINE ARTICLE: 139NJ
TITLE: Construction of biosensors using a gold-binding polypeptide and a miniature integrated surface plasmon resonance sensor
AUTHOR: Woodbury R G; Wendin C; Clendenning J; Melendez J; Elkind J; Bartholomew D; **Brown S**; Furlong C E (Reprint)
CORPORATE SOURCE: UNIV WASHINGTON, DEPT MED, SEATTLE, WA 98195 (Reprint); UNIV WASHINGTON, DEPT MED, SEATTLE, WA 98195; UNIV WASHINGTON, DEPT GENET, SEATTLE, WA 98195; TEXAS INSTRUMENTS INC, DALLAS, TX 75265; UNIV COPENHAGEN, DEPT MOL CELL BIOL, DK-1353 COPENHAGEN K, DENMARK
COUNTRY OF AUTHOR: USA; DENMARK
SOURCE: BIOSENSORS & BIOELECTRONICS, (1 NOV 1998) Vol. 13, No. 10, pp. 1117-1126.
Publisher: ELSEVIER ADVANCED TECHNOLOGY, OXFORD

FULFILLMENT CENTRE THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND.
ISSN: 0956-5663.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: AGRI
LANGUAGE: English
REFERENCE COUNT: 16
ABSTRACT:

Surface plasmon resonance (SPR) biosensors were constructed on miniature integrated sensors. Recognition elements were attached to the sensor surface using a gold-binding repeating polypeptide. Biosensors with fluorescyl groups attached to their surfaces were functional for at least 1 month of daily use with little decrease in response to the binding of an anti-**fluorescyl** monoclonal **antibody**. The coupling of protein A to the gold-binding polypeptide on the sensor surface enabled the biosensor to detect the binding of antibodies to the protein A and provided a sensor with convertible specificity. The system described herein provides a simple and rapid approach for the fabrication of highly specific, durable, portable and low cost SPR-based biosensors.

CATEGORY: BIOTECHNOLOGY & APPLIED MICROBIOLOGY; BIOPHYSICS
SUPPLEMENTARY TERM: biosensors; gold-binding polypeptide; SPR
SUPPL. TERM PLUS: PROTEIN; LIGANDS
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BAIN C D	1989	111	321	J AM CHEM SOC
BROWN S	1997	15	269	NAT BIOTECHNOL
DUCANCEL F	1989	3	139	PROTEIN ENG
FURLONG C E	1989	11	1126	P IEEE ENG MED BIOL
FURLONG C E	1996	2836	208	P SOC PHOTO-OPT INS
JONSSON U	1991	11	620	BIOTECHNIQUES
JORGENSON R C	1993	7	213	SENSOR ACTUAT B-CHEM
KARLSSON R	1994	221	142	ANAL BIOCHEM
LOFAS S	1990		1526	J CHEM SOC CHEM COMM
MELENDEZ J	1996	35	212	SENSOR ACTUAT B-CHEM
RAETHER H	1977		145	PHYS THIN FILMS
SCHLENOFF J B	1995	117	12528	J AM CHEM SOC
SHINOHARA Y	1994	223	189	EUR J BIOCHEM
SMITH P K	1985	150	76	ANAL BIOCHEM
STAROS J V	1986	156	220	ANAL BIOCHEM
WOHLHUETER R M	1994	153	181	J IMMUNOL

L200 ANSWER 18 OF 27 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 90:307004 SCISEARCH
THE GENUINE ARTICLE: DF913
TITLE: EXTRACTION METHODS FOR QUANTITATION OF GENTAMICIN RESIDUES FROM TISSUES USING **FLUORESCENCE** POLARIZATION **IMMUNOASSAY**
AUTHOR: **BROWN S A (Reprint)**; NEWKIRK D R; HUNTER R P; SMITH G G; SUGIMOTO K
CORPORATE SOURCE: TEXAS A&M UNIV SYST, TEXAS VET MED CTR, DEPT VET PHYSIOL & PHARMACOL, COLLEGE STN, TX, 77843 (Reprint); US FDA, CTR VET MED, RESIDUE EVALUAT BRANCH, ROCKVILLE, MD, 20057
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS (1990) Vol. 73, No. 3, pp. 479-483.
DOCUMENT TYPE: Note; Journal
FILE SEGMENT: LIFE; AGRI
LANGUAGE: ENGLISH
REFERENCE COUNT: 12
CATEGORY: CHEMISTRY, ANALYTICAL

RESEARCH FRONT: 90-4086 001; RENAL BRUSH-BORDER MEMBRANES; AMINOGLYCOSIDE ANTIBIOTICS; GENTAMICIN IN RATS; TOBRAMYCIN NEPHROTOXICITY; POLYASPARTIC ACID

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BRASSEUR R	1984	33	629	BIOCHEM PHARMACOL
BROWN S A	1985	46	69	AM J VET RES
BROWN S A	1986	47	2373	AM J VET RES
BROWN S A	1988	49	2056	AM J VET RES
BROWN S A	1988	32	595	ANTIMICROBIAL AGENTS
BROWN S A	1988	11	330	J VET PHARMACOL THER
GILBERT D N	1986	30	361	ANTIMICROB AGENTS CH
GUILIANO R A	1984	25	783	ANTIMICROB AGENTS CH
JOSEPOVITZ C	1982	223	314	J PHARMACOL EXP THER
KIRSCHBAUM B B	1984	229	409	J PHARMACOL EXP THER
SASTRASINH M	1982	222	350	J PHARMACOL EXP THER
SCHENTAG J J	1977	5	559	J PHARMACOKINET BIOP

L200 ANSWER 19 OF 27 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 84:163721 SCISEARCH
THE GENUINE ARTICLE: SJ217
TITLE: RETROSPECTIVE EXAMINATION OF LUNG-TISSUE SPECIMENS FOR THE PRESENCE OF LEGIONELLA ORGANISMS - COMPARISON OF AN INDIRECT **FLUORESCENT-ANTIBODY** SYSTEM WITH DIRECT **FLUORESCENT-ANTIBODY** TESTING
AUTHOR: **BROWN S L (Reprint)**; BIBB W F; MCKINNEY R M
CORPORATE SOURCE: CTR DIS CONTROL, CTR INFECT DIS, DIV BACTERIAL DIS, BIOTECHNOL BRANCH, ATLANTA, GA, 30333 (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF CLINICAL MICROBIOLOGY, (1984) Vol. 19, No. 4, pp. 468-472.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: 23
CATEGORY: MICROBIOLOGY
RESEARCH FRONT: 84-3145 001; EPIDEMIOLOGICAL STUDIES OF LEGIONNAIRES-DISEASE CAUSED BY LEGIONELLA-PNEUMOPHILA AND OTHER LEGIONELLA INFECTIONS

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BIBB W F	1981	14	674	J CLIN MICROBIOL
BIBB W F	1983	17	346	J CLIN MICROBIOL
BISSIT M L	1983	17	887	J CLIN MICROBIOL
BLACKMON J A	1981	103	428	AM J PATHOL
BRENNER D J	1979	90	656	ANN INTERN MED
BRENNER D J	1980	4	111	CURR MICROBIOL
CHERRY W B	1978	8	329	J CLIN MICROBIOL
CHERRY W B	1982	15	290	J CLIN MICROBIOL
CHERRY W B	1979		92	LEGIONNAIRES DISEASE
EDELSTEIN P H	1982	97	809	ANN INTERN MED
ENGLAND A C	1980	93	58	ANN INTERN MED
GODING J W	1976	13	215	J IMMUNOL METHOD
HEBERT G A	1980	3	255	CURR MICROBIOL
LEWALLEN K R	1979	91	831	ANN INTERN MED
MCKINNEY R M	1979	90	621	ANN INTERN MED
MCKINNEY R M	1981	94	739	ANN INTERN MED
MCKINNEY R M	1980	1	1	CLIN IMMUNOL NEWSL

MCKINNEY R M	1980	12	395	J CLIN MICROBIOL
MCKINNEY R M	1983	255	91	ZENTRALBL BAKTERIO A
MORRIS G K	1980	12	718	J CLIN MICROBIOL
ORRISON L H	1983	45	536	APPL ENV MICROBIOL
THOMASON B M	1971	22	876	APPL MICROBIOL
YONKE C A	1982	115	633	AM J EPIDEMIOL

L200 ANSWER 20 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-163243 [21] WPIDS
DOC. NO. NON-CPI: N2002-124561
DOC. NO. CPI: C2002-050367
TITLE: Sample collector for aerosol liquids or airborne pathogens, comprises central member having slots, cylindrical member having non-wetted inner surface, capillary channel connected to fluid reservoir and motor.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): **BROWN, S B; SIMON, J N**
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6337213	B1	20020108	(200221)*		8

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 6337213	B1	Provisional	US 1998-113067P	19981221
			US 1999-456341	19991208

PRIORITY APPLN. INFO: US 1998-113067P 19981221; US 1999-456341 19991208

AB US 6337213 B UPAB: 20020403
NOVELTY - A sample collector comprising central member having slots, cylindrical member positioned around the central member and having a non-wetted inner surface, collector adjacent to central member end, capillary channel connected to a fluid reservoir and causes particles in air to be trapped in wetted slots and motor for rotating the central member, is new.

DETAILED DESCRIPTION - A sample collector comprising a central cylindrical member having vertically extending slots, a cylindrical member positioned around the central cylindrical member having a non-wetted inner surface, a fluid reservoir, a collector positioned adjacent to one end of the central cylindrical member, a capillary channel for passing air through the central cylindrical member and causing particles in the air to become trapped in the wetted slots, and a motor for rotating the central cylindrical member, is new. A fluid in the reservoir is connected to the central cylindrical member end so that the vertically extending slots are wetted. The motor forces the trapped particles out of the wetted slots to impinge on the non-wetted inner surface of the cylindrical member and deflect towards the collector.

An INDEPENDENT CLAIM is also included for capturing and concentrating 1-10 micro m respirable particles into a sub-milliliter of fluid comprising trapping the particles in wetted capillary channels, forcing the trapped particles out of the wetted capillary channels onto a non-wetted wall surface, and collecting the particles deflected from the non-wetted wall surface.

USE - The sample collector is used for collecting and concentrating small (preferably 1-10 micro m) aerosol liquids or airborne pathogens into sub-milliliter volume of fluid.

ADVANTAGE - The inventive collector is a low power, man-portable sample collector which can concentrate the sample into a volume less than 100 micro liter. It is compatible with polymerase chain reactions or mini-flow cytometers.

DESCRIPTION OF DRAWING(S) - The figure is illustrates the sample collector operating in the collection phase of the method.

Central cylindrical member 11
Cylindrical member 12
Openings 16
Fluid reservoir 19
Collector 21
Deflector 22
Motor 24
Dwg.1/4

L200 ANSWER 21 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-070732 [08] WPIDS
DOC. NO. NON-CPI: N2001-053570
TITLE: Dental practice system for the optical detection of dental disease using polarized light involves optically measuring depolarization of incident light backscattered from dental tissues, e.g., in teeth and bone.
DERWENT CLASS: P31 S05
INVENTOR(S): **COLSTON, B W**; DA SILVA, L B; **EVERETT, M J**; FRIED, D; SATHYAM, U S
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000069333	A1	20001123	(200108)*	EN	33

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000051476 A 20001205 (200113)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000069333	A1	WO 2000-US13878	20000519
AU 2000051476	A	AU 2000-51476	20000519

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000051476	A Based on	WO 200069333

PRIORITY APPLN. INFO: US 1999-314848 19990519

AB WO 200069333 A UPAB: 20010207

NOVELTY - The system optically detects the change in polarizatiion of the incident light (12) backscattered form dental tissues (10), as the demineralization of tooth enamel, the precursor to caries disease, modifies the scattering properies of the tissue resulting in depolarization of the incident light, which is then detected (24) by the

optical imaging system.
DETAILED DESCRIPTION - An independent claim describes a method for examining a dentaltissue of interest.
USE - For the optical detection of dental disease using polarized light.
ADVANTAGE - Provides safe, easy early diagnosis of caries.
DESCRIPTION OF DRAWING(S) - The drawing shows a polarimetric imaging system used with the invention.
the incident light 12
the dental tissues sample 10
the detector 24
Dwg.1/6

L200 ANSWER 22 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-080228 [09] WPIDS
DOC. NO. NON-CPI: N2001-061157
TITLE: Dental optical coherence domain reflectometry explorer provides profile of optical scattering as function of depth in tissue at point where tip of dental explorer touches the tissue providing data on dental tissue internal structure.
DERWENT CLASS: P31 S05 V07
INVENTOR(S): **COLSTON, B W**; DA SILVA, L B; **EVERETT, M J**; SATHYAM, U S
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 92
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000069330	A1	20001123	(200109)*	EN	31

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000048500	A	20001205	(200113)		
US 6179611	B1	20010130	(200113)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 2000069330	A1		WO 2000-US13259	20000515
AU 2000048500	A		AU 2000-48500	20000515
US 6179611	B1	Provisional	US 1999-116884P	19990122
			US 1999-315000	19990519

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000048500	A	Based on	WO 200069330

PRIORITY APPLN. INFO: US 1999-315000 19990519; US 1999-116884P 19990122

AB WO 200069330 A UPAB: 20010213
NOVELTY - The explorer provides a profile of optical scattering as a function of depth in tissue at the point where dental explorer tip touches the tissue providing data on dental tissue internal structure. This is then used to detect caries and peridontal disease. The explorer in moving across the tooth or other tissue creates a series of profiles of optical

scattering or tissue microstructure.

DETAILED DESCRIPTION - An independent claim describes a method for producing an optical coherence domain reflectometry image of a dental tissue of interest.

USE - As a dental optical coherence domain reflectometry explorer.

ADVANTAGE - Provides a device that can provide early, safe and painless diagnosis of caries and periodontal disease.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic of an optical coherence domain reflectometry system with a dental device.
Dwg.1/14

L200 ANSWER 23 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-126329 [11] WPIDS
DOC. NO. NON-CPI: N2000-095262
DOC. NO. CPI: C2000-038388
TITLE: Multiple wavelength spectroscopic measurement for blood hemoglobin.
DERWENT CLASS: B04 J04 S03 S05
INVENTOR(S): CARTLAND, H E; **COLSTON, B W; EVERETT, M J**; NATHEL, H; ROE, J N
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6015969	A	20000118	(200011)*		10

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 6015969	A	CIP of	US 1996-714745	19960916
			US 1998-8234	19980116

PRIORITY APPLN. INFO: US 1998-8234 19980116; US 1996-714745 19960916

AB US 6015969 A UPAB: 20000301
NOVELTY - A light beam has one wavelength, not absorbed, and another strongly absorbed, by target species. The beam is split into sample (22) and reference (24) beams. The sample beam, is passed through a sample (30) and the resulting reflected beam is collected. The reference beam is reflected from a variable distance mirror (32) from which the reflections are collected. The two collected beams are optically mixed to provide interference fringes.

DETAILED DESCRIPTION - The sample is a turbid inhomogeneous medium which is host to a series of individual targeted species. The collected beams (36,40) are optically mixed. Those photons in the reflected sample beam that are within a coherence length of having traveled the same distance as those in the reflected reference beam provide interference fringes for each of the two wavelengths. The interference fringes have an amplitude proportional to the square root of the number of selected photons in the reflected sample beam. The amplitudes of the interference fringes for each of the two different wavelengths are detected and demodulated. An electric signal is produced proportional to each of the amplitudes. The ratio of the two electrical signals is determined. This is related to the concentration of the individual targeted species in the medium.

USE - The method is especially suited to absolute measurements of various blood constituents in living tissue, e.g. for measuring the oxygen concentrations in blood hemoglobin.

ADVANTAGE - The measurements are effected in living tissue by

non-invasive harmless methods. The method may be used with highly diffuse, inhomogeneous mediums.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic diagram of the system used to measure light-absorbing species in a highly diffuse inhomogeneous medium.

Sample beam 22

Reference beam 24

Sample 30

Mirror 32

Beam reflected from sample 36

Beam reflected from mirror 40

Dwg.1/2

L200 ANSWER 24 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-580564 [49] WPIDS
DOC. NO. NON-CPI: N1999-428608
TITLE: Guidewire optical sensing apparatus for multiplexed optical coherence domain reflectometer (OCDR).
DERWENT CLASS: P31 P81
INVENTOR(S): **COLSTON, B W**; DA SILVA, L B; **EVERETT, M** ; MATTHEWS, D
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9949780	A1	19991007	(199949)*	EN	24
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9931200	A	19991018	(200010)		
US 6175669	B1	20010116	(200106)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9949780	A1	WO 1999-US6926	19990330
AU 9931200	A	AU 1999-31200	19990330
US 6175669	B1	US 1998-50571	19980330

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9931200	A	Based on	WO 9949780

PRIORITY APPLN. INFO: US 1998-50571 19980330

AB WO 9949780 A UPAB: 19991124

NOVELTY - The apparatus includes several optical fibers. A body of x-ray absorbing material surrounds the fiber and forms a flexible guidewire with embedded fibers. There is an optical coherence domain reflectometer. A multiplexer connects the OCDR to the fibers to sequentially switch to each of them.

USE - For medical use, e.g. angioplasty, stroke treatment, aneurysm, arteriovenous malformations, ophthalmic surgery, laparoscopic surgery, arthroscopic surgery, treatment of colorectal disorders, sinus disorders, ear surgery, pneumothoracic surgery, spinal surgery, bladder surgery, esophageal surgery, uteral disorders etc. or industrial uses.

ADVANTAGE - Reduces the size of the sensing apparatus.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic diagram of the OCDR guidewire optical sensing system with a multiplexed sample arm.
Dwg.2A/6

L200 ANSWER 25 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-580563 [49] WPIDS
DOC. NO. NON-CPI: N1999-428607
TITLE: Catheter or endoscope for use as an inspection device.
DERWENT CLASS: P31
INVENTOR(S): **COLSTON, B W**; DA SILVA, L B; **EVERETT, M**; MATTHEWS, D
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 85
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9949779	A1	19991007	(199949)*	EN	26
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9932161	A	19991018	(200010)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9949779	A1	WO 1999-US6925	19990330
AU 9932161	A	AU 1999-32161	19990330

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9932161	A	Based on	WO 9949779

PRIORITY APPLN. INFO: US 1998-50570 19980330
AB WO 9949779 A UPAB: 19991124
NOVELTY - The catheter includes several optical fibers around the edge of an inspection device. An optical coherence domain reflectometer (OCDR) is connected to the fibers via a multiplexer.
USE - As a catheter or endoscope (claimed) in medical, e.g. angioplasty, stroke treatment, aneurysm, arteriovenous malformations, ophthalmic surgery, laparoscopic surgery, arthroscopic surgery, treatment of colorectal disorders, sinus disorders, ear surgery, pneumothoracic surgery, spinal surgery, bladder surgery, esophageal surgery, uteral disorders etc. or industrial uses.
ADVANTAGE - Is of small size.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic diagram of an OCDR system for catheter guidance and optical sensing with multiplexed sample arm.
Dwg.2A/7

L200 ANSWER 26 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-081421 [07] WPIDS
DOC. NO. NON-CPI: N1999-058510
DOC. NO. CPI: C1999-024575
TITLE: Determining orientation of medical device - with respect to X-ray source by variation in response of scintillator

in conjunction with X-ray-blocking portion.
DERWENT CLASS: K08 L03 S03 S05
INVENTOR(S): **COLSTON, B W**; DA SILVA, L B; **EVERETT, M J**; FITCH, J P; MATTHEWS, D L; STONE, G F; STONE, G G
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 82
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9859259	A1	19981230	(199907)*	EN	41
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW					
AU 9882633	A	19990104	(199921)		
US 5912945	A	19990615	(199930)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9859259	A1	WO 1998-US13151	19980623
AU 9882633	A	AU 1998-82633	19980623
US 5912945	A	US 1997-880850	19970623

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9882633	A	Based on	WO 9859259

PRIORITY APPLN. INFO: US 1997-880850 19970623
AB WO 9859259 A UPAB: 19990217
An apparatus for determining the orientation of a device with respect to an X-ray source consists of: a) a scintillator portion (304) which generates photons upon the absorption of X-rays from the X-ray source; b) an X-ray-blocking portion placed so as to prevent X-rays from penetrating the scintillator portion when the blocking portion is inserted between the X-ray source and the scintillator portion; and c) a photon-transport mechanism (306) coupled to the scintillator portion and adapted to pass photons generated by the scintillator portion to a desired location.
USE - Useful to determine the rotational orientation of a medical device within a patient's body.
ADVANTAGE - Enables a constant indication of rotational orientation to be provided with respect to an X-ray source. The design is compact and suitable for use in confined spaces.
Dwg.3/25

L200 ANSWER 27 OF 27 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1995-403271 [51] WPIDS
DOC. NO. NON-CPI: N1995-292009
TITLE: High aspect ratio remote controlled pumping assembly eg. for water contamination appts. - has actuator mechanism for controlling movement of syringe like pumping members in opposite directions.
DERWENT CLASS: Q51 Q56 X25
INVENTOR(S): **BROWN, S B; MILANOVICH, F P**
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5466128	A	19951114	(199551)*		9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5466128	A	US 1993-95297	19930721

PRIORITY APPLN. INFO: US 1993-95297 19930721

AB US 5466128 A UPAB: 19951221
The pump assembly includes a pair of pump units mounted in a back-to-back relation, each pump unit including a movable member connected to an actuator. A device is operatively connected to the actuator for simultaneously moving the movable members in opposite directions. A device is provided for supplying material to be pumped to the pair of pump units, whereby a first of the pair of pump units is filling while a second of the pair of pump units is discharging.

The material supply device includes a sensor containing the material and each of the pair of pump units is operatively connected with the sensor for directing material into and withdrawing material from the sensor.

Dwg.3/4

=> fil capl; d que l20;d que l19; d que l29; d que l31; d que l33; d que l36; s (l20 or l19 or l29 or l31 or l33 or l36) not l199
FILE 'CAPLUS' ENTERED AT 11:53:40 ON 28 MAY 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 28 May 2002 VOL 136 ISS 22
FILE LAST UPDATED: 26 May 2002 (20020526/ED)

text

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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L18           8 SEA FILE=CAPLUS ABB=ON  LIQUID ARRAY#
L20           1 SEA FILE=CAPLUS ABB=ON  TECHNOLOGY/TI AND L18


L18           8 SEA FILE=CAPLUS ABB=ON  LIQUID ARRAY#
L19           1 SEA FILE=CAPLUS ABB=ON  YEAST/TI AND L18


L11        1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L13       37666 SEA FILE=CAPLUS ABB=ON  IMMUNOASSAY+OLD/CT
L14        2342 SEA FILE=CAPLUS ABB=ON  L13(L)FLUOR?
L21       28938 SEA FILE=CAPLUS ABB=ON  MICROPARTICLE# OR MICROSPHERE# OR
                MICRO(W)(PARTICLE# OR SPHERE#)
L25      100427 SEA FILE=CAPLUS ABB=ON  DISPOS?
L26       15733 SEA FILE=CAPLUS ABB=ON  PORTAB?
L28        3028 SEA FILE=CAPLUS ABB=ON  MICRO(A)(PARTICLE# OR BEAD# OR
                SPHERE#)
L29           4 SEA FILE=CAPLUS ABB=ON  (L11 OR L21 OR L28) AND L14 AND (L25
                OR L26)


L11        1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L16         876 SEA FILE=CAPLUS ABB=ON  LIQUID (2A)ARRAY#
L21       28938 SEA FILE=CAPLUS ABB=ON  MICROPARTICLE# OR MICROSPHERE# OR
                MICRO(W)(PARTICLE# OR SPHERE#)
L28        3028 SEA FILE=CAPLUS ABB=ON  MICRO(A)(PARTICLE# OR BEAD# OR
                SPHERE#)
L31           4 SEA FILE=CAPLUS ABB=ON  (L11 OR L21 OR L28) AND L16
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L11        1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L13       37666 SEA FILE=CAPLUS ABB=ON  IMMUNOASSAY+OLD/CT
L14        2342 SEA FILE=CAPLUS ABB=ON  L13(L)FLUOR?
L21       28938 SEA FILE=CAPLUS ABB=ON  MICROPARTICLE# OR MICROSPHERE# OR
                MICRO(W)(PARTICLE# OR SPHERE#)
L28        3028 SEA FILE=CAPLUS ABB=ON  MICRO(A)(PARTICLE# OR BEAD# OR
                SPHERE#)
L32      524794 SEA FILE=CAPLUS ABB=ON  PATTERN?
L33           2 SEA FILE=CAPLUS ABB=ON  (L11 OR L21 OR L28) AND L14 AND L32


L11        1846 SEA FILE=CAPLUS ABB=ON  MICROBEAD# OR MICRO BEAD#
L21       28938 SEA FILE=CAPLUS ABB=ON  MICROPARTICLE# OR MICROSPHERE# OR
                MICRO(W)(PARTICLE# OR SPHERE#)
L28        3028 SEA FILE=CAPLUS ABB=ON  MICRO(A)(PARTICLE# OR BEAD# OR
                SPHERE#)
L34         121 SEA FILE=CAPLUS ABB=ON  CAPTUR?(2A)SUBSTRAT?
L36           1 SEA FILE=CAPLUS ABB=ON  (L11 OR L21 OR L28) AND L34


L201         12 (L20 OR L19 OR L29 OR L31 OR L33 OR L36) NOT L199
```

previously printed w/ inventor search

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=> fil wpids; d que l55; d que l57; d que l59; d que l61; d que l67; d que l69; s (l55 or
l57 or l59 or l61 or l67 or l69) not l46; fil medl
FILE 'WPIDS' ENTERED AT 11:54:17 ON 28 MAY 2002
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FILE LAST UPDATED: 24 MAY 2002              <20020524/UP>
MOST RECENT DERWENT UPDATE           200233   <200233/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

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    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

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    TRADE USER GUIDE, PLEASE VISIT:
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    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<


L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L49          35 SEA FILE=WPIDS ABB=ON  FLUOROIMMUNOASSAY#
L50          28 SEA FILE=WPIDS ABB=ON  FLUORO(A)(IMMUNOASSAY# OR IMMUNO
                ASSAY#)
L51         506 SEA FILE=WPIDS ABB=ON  (IMMUNOASSAY# OR IMMUNO ASSAY#)(5A)FLUOR
                ?
L54          14 SEA FILE=WPIDS ABB=ON  LIQUID ARRAY#
L55           3 SEA FILE=WPIDS ABB=ON  L54 AND (L47 OR (L49 OR L50 OR L51))
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L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L49          35 SEA FILE=WPIDS ABB=ON  FLUOROIMMUNOASSAY#
L50          28 SEA FILE=WPIDS ABB=ON  FLUORO(A)(IMMUNOASSAY# OR IMMUNO
                ASSAY#)
L51         506 SEA FILE=WPIDS ABB=ON  (IMMUNOASSAY# OR IMMUNO ASSAY#)(5A)FLUOR
                ?
L56      412511 SEA FILE=WPIDS ABB=ON  PORTAB? OR DISPOS?
L57           1 SEA FILE=WPIDS ABB=ON  L47 AND (L49 OR L50 OR L51) AND L56


L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L56      412511 SEA FILE=WPIDS ABB=ON  PORTAB? OR DISPOS?
L58         376 SEA FILE=WPIDS ABB=ON  FLUORESCENT?(2A)ANTIBOD?
L59           1 SEA FILE=WPIDS ABB=ON  L47 AND L58 AND L56


L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L60         137 SEA FILE=WPIDS ABB=ON  CAPTUR?(3A)SUBSTRAT?
L61           4 SEA FILE=WPIDS ABB=ON  L47 AND L60


L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L49          35 SEA FILE=WPIDS ABB=ON  FLUOROIMMUNOASSAY#
L50          28 SEA FILE=WPIDS ABB=ON  FLUORO(A)(IMMUNOASSAY# OR IMMUNO
                ASSAY#)
L51         506 SEA FILE=WPIDS ABB=ON  (IMMUNOASSAY# OR IMMUNO ASSAY#)(5A)FLUOR
                ?
L58         376 SEA FILE=WPIDS ABB=ON  FLUORESCENT?(2A)ANTIBOD?
L65         648 SEA FILE=WPIDS ABB=ON  DIPSTICK# OR DIP STICK#
L66        1164 SEA FILE=WPIDS ABB=ON  TEST STRIP#
L67           1 SEA FILE=WPIDS ABB=ON  L47 AND ((L49 OR L50 OR L51) OR L58)
                AND (L65 OR L66)


L47       11069 SEA FILE=WPIDS ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
                OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L68        1676 SEA FILE=WPIDS ABB=ON  PATTERN?(2A)ARRAY?
L69           5 SEA FILE=WPIDS ABB=ON  L47 AND L68


L202         14 (L55 OR L57 OR L59 OR L61 OR L67 OR L69) NOT L46
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previously printed

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FILE 'MEDLINE' ENTERED AT 11:54:18 ON 28 MAY 2002

 FILE LAST UPDATED: 22 MAY 2002 (20020522/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week. A new current-awareness alert
 frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.
```

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLDMEDLINE file segment now contains data from 1958 through 1965.
Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the
Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
SUBSTANCE IDENTIFICATION.

```
=> d que 199; d que l103; d que l107; d que 191; d que l102; s (191 or l102) not 180
L82        78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L88        10737 SEA FILE=MEDLINE ABB=ON  MICROSPHERES/CT
L96           94 SEA FILE=MEDLINE ABB=ON  LIQUID (2A)ARRAY#
L99            0 SEA FILE=MEDLINE ABB=ON  L96 AND (L82 OR L88)



L79        18498 SEA FILE=MEDLINE ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR
                 SPHERE#) OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L82        78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L100       43723 SEA FILE=MEDLINE ABB=ON  DISPOS? OR PORTAB?
L103           0 SEA FILE=MEDLINE ABB=ON  L79 AND L82 AND L100



L79        18498 SEA FILE=MEDLINE ABB=ON  MICRO(A)(BEAD# OR PARTICLE# OR
                 SPHERE#) OR MICROBEAD# OR MICROPARTICLE# OR MICROSPHERE#
L82        78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L104         393 SEA FILE=MEDLINE ABB=ON  PATTERN?(5A)ARRAY?
L107           0 SEA FILE=MEDLINE ABB=ON  L82 AND L104 AND L79



L82        78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L86          977 SEA FILE=MEDLINE ABB=ON  L82(L)MT/CT
L88        10737 SEA FILE=MEDLINE ABB=ON  MICROSPHERES/CT
L89          989 SEA FILE=MEDLINE ABB=ON  L88/MAJ
L91            2 SEA FILE=MEDLINE ABB=ON  L86 AND L89



L82        78646 SEA FILE=MEDLINE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE+NT/CT
L88        10737 SEA FILE=MEDLINE ABB=ON  MICROSPHERES/CT
L101         199 SEA FILE=MEDLINE ABB=ON  L82(L)IS/CT
L102           3 SEA FILE=MEDLINE ABB=ON  L101 AND L88


L203           5 (L91 OR L102) NOT (L80)
=> fil embase; d que l120; d que l124; d que l129; d que l22; d que l125; s (l120 or l124
or l129) not l119
FILE 'EMBASE' ENTERED AT 11:55:30 ON 28 MAY 2002
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 FILE COVERS 1974 TO 23 May 2002 (20020523/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.
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Subheading MT = methods

Subheading IS = instrumentation

previously printed

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L108        579 SEA FILE=EMBASE ABB=ON  FLUOROIMMUNOASSAY/CT
L109       5421 SEA FILE=EMBASE ABB=ON  MICROSPHERE/CT
L120          1 SEA FILE=EMBASE ABB=ON  L108 AND L109


L109       5421 SEA FILE=EMBASE ABB=ON  MICROSPHERE/CT
L123       1277 SEA FILE=EMBASE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT
L124          1 SEA FILE=EMBASE ABB=ON  L109 AND L123


L108        579 SEA FILE=EMBASE ABB=ON  FLUOROIMMUNOASSAY/CT
L123       1277 SEA FILE=EMBASE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT
L126      47371 SEA FILE=EMBASE ABB=ON  DISPOS? OR PORTAB?
L127         10 SEA FILE=EMBASE ABB=ON  (L123 OR L108) AND L126
L128      26315 SEA FILE=EMBASE ABB=ON  FIBEROPTIC? OR FIBER OPTIC? OR SEWAGE
L129          7 SEA FILE=EMBASE ABB=ON  L127 NOT L128


L1           22 SEA FILE=CAPLUS ABB=ON  COLSTON B?/AU
L2          156 SEA FILE=CAPLUS ABB=ON  EVERETT M?/AU
L3           73 SEA FILE=CAPLUS ABB=ON  MILANOVICH F?/AU
L4         4043 SEA FILE=CAPLUS ABB=ON  BROWN S?/AU
L5            0 SEA FILE=CAPLUS ABB=ON  VENKATESWARAM K?/AU
L6         1877 SEA FILE=CAPLUS ABB=ON  SIMON J?/AU
L21       28938 SEA FILE=CAPLUS ABB=ON  MICROPARTICLE# OR MICROSPHERE# OR
                MICRO(W)(PARTICLE# OR SPHERE#)
L22           9 SEA FILE=CAPLUS ABB=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6) AND
                L21


L121        445 SEA FILE=EMBASE ABB=ON  LIQUID(3A)ARRAY?
L123       1277 SEA FILE=EMBASE ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT
L125          0 SEA FILE=EMBASE ABB=ON  L123 AND L121


L204          9 (L120 OR L124 OR L129) NOT L119
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previously printed

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=> fil biotechno; d que l142; d que l148;d que l142; s (l142 or l148) not l141
FILE 'BIOTECHNO' ENTERED AT 11:55:52 ON 28 MAY 2002
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FILE LAST UPDATED: 22 MAY 2002      <20020522/UP>
FILE COVERS 1980 TO DATE.

>>>  SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
     /CT AND BASIC INDEX  <<<


L131        577 SEA FILE=BIOTECHNO ABB=ON  FLUOROIMMUNOASSAY/CT
L132       3397 SEA FILE=BIOTECHNO ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L142          5 SEA FILE=BIOTECHNO ABB=ON  L131 AND L132
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L131        577 SEA FILE=BIOTECHNO ABB=ON  FLUOROIMMUNOASSAY/CT
L145       7742 SEA FILE=BIOTECHNO ABB=ON  DISPOS? OR PORTAB?
L146          9 SEA FILE=BIOTECHNO ABB=ON  L131 AND L145
L147        426 SEA FILE=BIOTECHNO ABB=ON  FIBEROPTIC? OR FIBER OPTIC?
L148          7 SEA FILE=BIOTECHNO ABB=ON  L146 NOT L147


L131        577 SEA FILE=BIOTECHNO ABB=ON  FLUOROIMMUNOASSAY/CT
L132       3397 SEA FILE=BIOTECHNO ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L142          5 SEA FILE=BIOTECHNO ABB=ON  L131 AND L132


L205         12 (L142 OR L148) NOT L141   previously printed

=> fil jic; d que l165; d que l167; d que l172; d que l162
FILE 'JICST-EPLUS' ENTERED AT 11:56:08 ON 28 MAY 2002
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FILE COVERS 1985 TO 28 MAY 2002 (20020528/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.


L155         82 SEA FILE=JICST-EPLUS ABB=ON  FLUOROIMMUNOASSAY?
L156       8867 SEA FILE=JICST-EPLUS ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT

L163        113 SEA FILE=JICST-EPLUS ABB=ON  LIQUID (3A)ARRAY?
L165          0 SEA FILE=JICST-EPLUS ABB=ON  L163 AND (L155 OR L156)


L155         82 SEA FILE=JICST-EPLUS ABB=ON  FLUOROIMMUNOASSAY?
L156       8867 SEA FILE=JICST-EPLUS ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT

L157       2738 SEA FILE=JICST-EPLUS ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L166      31496 SEA FILE=JICST-EPLUS ABB=ON  DISPOS? OR PORTAB?
L167          0 SEA FILE=JICST-EPLUS ABB=ON  L166 AND (L155 OR L156) AND L157


L155         82 SEA FILE=JICST-EPLUS ABB=ON  FLUOROIMMUNOASSAY?
L156       8867 SEA FILE=JICST-EPLUS ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT

L157       2738 SEA FILE=JICST-EPLUS ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L171     236698 SEA FILE=JICST-EPLUS ABB=ON  PATHOGEN? OR BACTERI? OR VIRUS?
                OR MICROB?
L172          0 SEA FILE=JICST-EPLUS ABB=ON  (L155 OR L156) AND L157 AND L171


L155         82 SEA FILE=JICST-EPLUS ABB=ON  FLUOROIMMUNOASSAY?
L156       8867 SEA FILE=JICST-EPLUS ABB=ON  FLUORESCENT ANTIBODY TECHNIQUE/CT

L161        980 SEA FILE=JICST-EPLUS ABB=ON  MICROSPHERE/CT
L162          1 SEA FILE=JICST-EPLUS ABB=ON  (L155 OR L156) AND L161
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=> fil scisearch; d que l193; d que l196; s (l193 or l196) not l186
FILE 'SCISEARCH' ENTERED AT 11:56:26 ON 28 MAY 2002
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FILE COVERS 1974 TO 24 May 2002 (20020524/ED)


L175         905 SEA FILE=SCISEARCH ABB=ON  FLUOROIMMUNOASSAY? OR FLUORO(A)(IMMU
                 NOASSAY? OR IMMUNO ASSAY?)
L176        2083 SEA FILE=SCISEARCH ABB=ON  FLUOR?(5A)(IMMUNOASSAY? OR IMMUNO
                 ASSAY?)
L185        4283 SEA FILE=SCISEARCH ABB=ON  FLUORESC?(3A)ANTIBOD?
L188         716 SEA FILE=SCISEARCH ABB=ON  LIQUID(3A) ARRAY?
L193           1 SEA FILE=SCISEARCH ABB=ON  (L175 OR L176 OR L185) AND L188



L175         905 SEA FILE=SCISEARCH ABB=ON  FLUOROIMMUNOASSAY? OR FLUORO(A)(IMMU
                 NOASSAY? OR IMMUNO ASSAY?)
L176        2083 SEA FILE=SCISEARCH ABB=ON  FLUOR?(5A)(IMMUNOASSAY? OR IMMUNO
                 ASSAY?)
L184       16510 SEA FILE=SCISEARCH ABB=ON  MICROBEAD# OR MICROPARTICLE# OR
                 MICROSPHERE# OR MICRO(A)(BEAD# OR PARTICLE# OR SPHERE#)
L185        4283 SEA FILE=SCISEARCH ABB=ON  FLUORESC?(3A)ANTIBOD?
L187          87 SEA FILE=SCISEARCH ABB=ON  L184 AND (L175 OR L176 OR L185)
L194      651347 SEA FILE=SCISEARCH ABB=ON  VIRUS? OR MICROB? OR BACTERI? OR
                 VIRUS? OR PATHOGEN# OR MICROORGANISM# OR MICRO ORGANISM#
L195          16 SEA FILE=SCISEARCH ABB=ON  L187 AND L194
L196           8 SEA FILE=SCISEARCH ABB=ON  L195 AND VIRUS?


L206           9 (L193 OR L196) NOT (L186) previously printed
=> dup rem l203,l162,l201,l205,l204,l206,l202
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FILE 'WPIDS' ENTERED AT 11:57:22 ON 28 MAY 2002
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PROCESSING COMPLETED FOR L203
PROCESSING COMPLETED FOR L162
PROCESSING COMPLETED FOR L201
PROCESSING COMPLETED FOR L205
PROCESSING COMPLETED FOR L204
PROCESSING COMPLETED FOR L206
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PROCESSING COMPLETED FOR L202
L207 51 DUP REM L203 L162 L201 L205 L204 L206 L202 (11 DUPLICATES REMOVED)
ANSWERS '1-5' FROM FILE MEDLINE
ANSWER '6' FROM FILE JICST-EPLUS
ANSWERS '7-18' FROM FILE CAPLUS
ANSWERS '19-30' FROM FILE BIOTECHNO
ANSWER '31' FROM FILE EMBASE
ANSWERS '32-40' FROM FILE SCISEARCH
ANSWERS '41-51' FROM FILE WPIDS

=> d ibib ab 1-31; d iall 32-40; d ibib ab 41-51; fil hom

L207 ANSWER 1 OF 51 MEDLINE
ACCESSION NUMBER: 2002206708 MEDLINE
DOCUMENT NUMBER: 21936795 PubMed ID: 11939734
TITLE: A multiplexed fluorescent microsphere immunoassay for antibodies to pneumococcal capsular polysaccharides.
AUTHOR: Pickering Jerry W; Martins Thomas B; Greer Ryan W; Schroder M Carl; Astill Mark E; Litwin Christine M; Hildreth Stephen W; Hill Harry R
CORPORATE SOURCE: Associated Regional and University Pathologists Institute for Clinical and Experimental Pathology, Salt Lake City, UT 84108, USA.
SOURCE: AMERICAN JOURNAL OF CLINICAL PATHOLOGY, (2002 Apr) 117 (4) 589-96.
Journal code: 0370470. ISSN: 0002-9173.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200204
ENTRY DATE: Entered STN: 20020410
Last Updated on STN: 20020419
Entered Medline: 20020418
AB We developed a multiplexed indirect immunofluorescent assay for antibodies to pneumococcal polysaccharides (PnPs) based on the Luminex multiple analyte profiling system (Luminex, Austin, TX). The assay simultaneously determines serum IgG concentrations to 14 PnPs serotypes: 1, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 12F; 14, 18C, 19F, and 23F. To assess the specificity of the multiplexed assay for each individual serotype, inhibition-of-binding studies were conducted using adult serum samples obtained after pneumococcal vaccination. Except for the closely related serotypes 9V and 9N, we demonstrated inhibition by homologous serotypes of more than 95% and inhibition by heterologous serotypes of less than 15% for all 14 PnPs serotypes. There was, however, high heterologous inhibition of 50% or greater with some serotypes. These cross-reacting antibodies could not be removed by preabsorption with pneumococcal C-polysaccharide but were removed by additional preabsorption with serotype 22F polysaccharide. The multiplexed Luminex assay showed good overall agreement with a well-established enzyme-linked immunosorbent assay that is currently recommended for evaluation of pneumococcal vaccine immunogenicity.

L207 ANSWER 2 OF 51 MEDLINE
ACCESSION NUMBER: 97019741 MEDLINE
DOCUMENT NUMBER: 97019741 PubMed ID: 8866215
TITLE: Evaluation of a time-resolved fluorescence microscope using a phosphorescent Pt-porphine model system.
AUTHOR: Hennink E J; de Haas R; Verwoerd N P; Tanke H J
CORPORATE SOURCE: Department of Cytochemistry and Cytometry, Leiden University, The Netherlands.
SOURCE: CYTOMETRY, (1996 Aug 1) 24 (4) 312-20.
Journal code: D92; 8102328. ISSN: 0196-4763.
PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970313
Last Updated on STN: 19970313
Entered Medline: 19970305

AB A time-resolved fluorescence microscope is presented that allows the sensitive detection of delayed luminescent labels with decay times from one microsecond to several milliseconds. The microscope utilizes an argon ion laser chopped with an acoustooptical modulator as excitation light source in combination with a gated multichannel plate image intensifier in the image plane. A theoretical model for the detection efficiency of practically any time-resolved fluorescence microscope is verified using phosphorescent Pt-porphine-stained Sephadex beads. The detection efficiency of the presented setup was shown to be 42%, which is near the theoretical limit of 50% for non-saturated luminescent dyes. The suppression of prompt fluorescence signals was found to be 1:5,500. The Pt-porphine beads proved to be an excellent model system for time-resolved fluorescence microscopy, showing a high extinction coefficient and high phosphorescence quantum yield in aqueous environment under room temperature conditions. Furthermore, for the microscope described the decay time of the Pt-porphine beads of 47 microseconds is long enough to enable efficient suppression of the prompt fluorescence while maintaining a high excitation and emission duty cycle. This is considered to be of vital importance in order not to saturate the luminescence with the excitation intensities commonly used in fluorescence microscopy.

L207 ANSWER 3 OF 51 MEDLINE
ACCESSION NUMBER: 94007174 MEDLINE
DOCUMENT NUMBER: 94007174 PubMed ID: 7691444
TITLE: Homogeneous immunofluorometric assays of alpha-fetoprotein with macroporous, monosized particles and flow cytometry.
AUTHOR: Frengen J; Schmid R; Kierulf B; Nustad K; Paus E; Berge A; Lindmo T
CORPORATE SOURCE: Department of Physics, University of Trondheim, Norway.
SOURCE: CLINICAL CHEMISTRY, (1993 Oct) 39 (10) 2174-81.
Journal code: DBZ; 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199311
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 19970203
Entered Medline: 19931112

AB We evaluated two homogeneous immunofluorometric assays (IFMAs) of alpha-fetoprotein (AFP) based on new macroporous acrylate particles combined with flow cytometry. The standard IFMA, requiring 1 h of incubation, provided a working range from 1.8 to > 900 kIU/L (CV < 10%) and a detection limit of 0.6 kIU/L. Use of overnight incubation and a lower particle concentration extended the working range by 1 decade in the lower end. Analytical recoveries for the standard IFMA varied between 97% and 108%. The slope and y-intercept of the regression line correlating measurements by the standard IFMA and a routine immunoradiometric assay were not significantly different from 1 and 0, respectively ($P > 0.5$), and the correlation coefficient was 0.996. High precision and warning of spuriously high measurements were obtained by including in each sample separate particle types for detecting instrument instability and measuring nonspecific binding only.

L207 ANSWER 4 OF 51 MEDLINE
ACCESSION NUMBER: 86033107 MEDLINE

DOCUMENT NUMBER: 86033107 PubMed ID: 3902746
TITLE: The aperture-defined microvolume (ADM) method: automated measurements of enzyme activity using an inverted fluorescence microscope.
AUTHOR: Tanke H J; Deelder A M; Dresden M H; Jongkind J F; Ploem J S
CONTRACT NUMBER: AI-15864 (NIAID)
SOURCE: HISTOCHEMICAL JOURNAL, (1985 Jul) 17 (7) 797-804.
Journal code: G9A; 0163161. ISSN: 0018-2214.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198512
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19970203
Entered Medline: 19851210

AB The aperture-defined microvolume (ADM) method is based on the relatively constant absorbance or fluorescence of a microvolume of homogeneously coloured material, which is defined by the numerical aperture of the objective. This paper describes the principle of the method and discusses the equipment needed. The main applications reported so far for the measurement of enzyme activity are reviewed. Among these are the quantification of ELISA and DASS tests used in immunology, kinetic studies of enzymes in solution using fluorogenic substrates, and the measurement of enzyme activity in single cells or cell fractions that have been isolated by flow sorting. Typical characteristics of automated ADM measurements include a coefficient of variation of less than 3%, a lower detection limit of a few nanogrammes of fluorescing dye (e.g. 4-methylumbelliferone) and a linear relationship between fluorescence yield and fluorophore concentration over a range of 0.01 to 2.5 nmol. The scanning of Terasaki-type trays and 96-well microtitration plates can be completely automated and requires approximately one minute.

L207 ANSWER 5 OF 51 MEDLINE
ACCESSION NUMBER: 84137053 MEDLINE
DOCUMENT NUMBER: 84137053 PubMed ID: 6366066
TITLE: Particle concentration fluorescence immunoassay (PCFIA): a new, rapid immunoassay technique with high sensitivity.
AUTHOR: Jolley M E; Wang C H; Ekenberg S J; Zuelke M S; Kelso D M
SOURCE: JOURNAL OF IMMUNOLOGICAL METHODS, (1984 Feb 24) 67 (1) 21-35.
Journal code: IFE; 1305440. ISSN: 0022-1759.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198404
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19840411

AB A new solid-phase fluorescence immunoassay technique is described and is exemplified by the detection of murine monoclonal antibodies to human IgG in hybridoma culture supernatants and the detection of murine IgG. The assay is performed in a specially designed 96-well plate. For antibody detection, antigen bound to submicron polystyrene particles is bound to its specific antibody, which is in turn reacted with fluorescein-labeled affinity-purified goat anti-mouse IgG. The reaction is complete in 10 min at ambient temperature. The solid phase is separated from the reaction mixture by filtration, washed and the total particle-bound fluorescence is determined by front-surface fluorimetry. The sensitivity of the technique for antibody detection is equivalent to enzyme-linked immunoabsorbent assay and 2-4 ng/ml for murine IgG detection. It is readily amenable to

automation.

L207 ANSWER 6 OF 51 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 880125196 JICST-EPlus
TITLE: Immunoassay using microsphere.
AUTHOR: MIZUKOSHI TATSUYA
CORPORATE SOURCE: Showadenko Seikagakuken
SOURCE: Kobunshi (High Polymers, Japan), (1987) vol. 36, no. 9, pp. 671. Journal Code: F0168A (Fig. 1, Ref. 5)
CODEN: KOBUA3; ISSN: 0454-1138
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Commentary
LANGUAGE: Japanese
STATUS: New

L207 ANSWER 7 OF 51 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2001:152872 CAPLUS
DOCUMENT NUMBER: 134:203076
TITLE: **Liquid array technology**
INVENTOR(S): Chandler, Mark B.
PATENT ASSIGNEE(S): Luminex Corporation, USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001014589	A2	20010301	WO 2000-US22769	20000821

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-149710P P 19990820
AB This invention is directed to compns. and methods of screening, sequencing, and/or quantitating a nucleic acid of interest by hybridizing that nucleic acid with a set of oligonucleotide probes, which are coupled to fluorescently addressable multicolored **microparticles**. These **microparticles** are provided as a **liq. array** that can be positioned in predetd. wells or reaction vessels of a microtiter plate. For sequencing purposes, each such **liq. array** preferably comprises every possible combination of sequences for a given length of a probe. Hybridization occurs by complementary recognition of the analyte of interest with a probe. Probe, target, and/or competing mol. are tagged with a reporter mol. so that upon hybridization, the changes in fluorescence signal parameters are recorded and analyzed.

L207 ANSWER 8 OF 51 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
ACCESSION NUMBER: 2000:756917 CAPLUS
DOCUMENT NUMBER: 133:306332
TITLE: Detection of nucleic acid reactions on **microsphere** or bead arrays
INVENTOR(S): Gunderson, Kevin; Stuelpnagel, John R.; Chee, Mark S.
PATENT ASSIGNEE(S): Illumina, Inc., USA
SOURCE: PCT Int. Appl., 161 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000063437	A2	20001026	WO 2000-US10716	20000420
WO 2000063437	A3	20020117		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6355431	B1	20020312	US 2000-517945	20000303
EP 1196630	A2	20020417	EP 2000-926204	20000420

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.:

US 1999-130089P	P	19990420
US 1999-135051P	P	19990520
US 1999-135053P	P	19990520
US 1999-135123P	P	19990520
US 1999-160917P	P	19991022
US 1999-160927P	P	19991022
US 1999-161148P	P	19991022
US 1999-425633	A	19991022
US 2000-513362	A	20000225
US 2000-517945	A	20000303
US 2000-535854	A	20000327
WO 2000-US10716	W	20000420

AB The present invention is directed to methods and compns. for the use of **microsphere** arrays to detect and quantify a no. of nucleic acid reactions. The methods comprise providing a hybridization complex comprising the target sequence and a capture probe covalently attached to a **microsphere** on a surface of a substrate. The hybridization complex can comprise the capture probe, a capture extender probe, and the target sequence. The invention finds use in genotyping, i.e. the detn. of the sequence of nucleic acids, particularly alterations such as nucleotide substitutions (mismatches) and single nucleotide polymorphisms (SNPs). Similarly, the invention finds use in the detection and quantification of a nucleic acid target using a variety of amplification techniques, including both signal amplification and target amplification. The methods and compns. of the invention can be used in nucleic acid sequencing reactions as well. All applications can include the use of adapter sequences to allow for universal arrays.

L207 ANSWER 9 OF 51 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
ACCESSION NUMBER: 1999:388353 CAPLUS
DOCUMENT NUMBER: 131:16086
TITLE: One-step fluorescent immunosensor test
INVENTOR(S): Pronovost, Allan D.; Nelson, Alan M.; Bobritchi, Christian
PATENT ASSIGNEE(S): Quidel Corporation, USA
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9930131	A1	19990617	WO 1998-US7079	19980410
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1046027	A1	20001025	EP 1998-915407	19980410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1997-989249 A 19971211
WO 1998-US7079 W 19980410

AB An immunoassay for detecting the presence of an analyte in a sample soln. is disclosed. The immunoassay includes a nitrocellulose solid support matrix with a sample zone, a label zone and a capture zone. A soln. of fluorescent latex beads having a lanthanide chelate in assocn. with antibodies against the target analyte is **disposed** onto the label zone.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L207 ANSWER 10 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:868273 CAPLUS
DOCUMENT NUMBER: 136:2486
TITLE: Fluorescent nanocrystal-labeled **microspheres** for fluorescence analyses
INVENTOR(S): Barbera-Guillem, Emilio; Castro, Stephanie
PATENT ASSIGNEE(S): Biocrystal Ltd., USA
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089585	A1	20011129	WO 2001-US16678	20010523
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6309701	B1	20011030	US 2000-577761	20000524

PRIORITY APPLN. INFO.: US 2000-577761 A 20000524
US 2000-633953 A 20000808
US 1998-107829P P 19981110
US 1999-372729 A2 19990811

AB Provided are a fluorescent **microsphere** comprised of a polymeric **microsphere** labeled with a plurality of fluorescent nanocrystals, and a method of producing the fluorescent **microspheres** which comprises contacting the polymeric **microsphere** with a plurality of fluorescent nanocrystals under suitable conditions in which the fluorescent nanocrystals become operably bound to or embedded in the polymeric **microsphere**. Also provided is a method of using the fluorescent **microspheres** capable of detg. the presence or absence of a predetd. no. of analytes in a sample by contacting the sample with the fluorescent **microspheres**, and detecting the

fluorescence signal **pattern** of excited fluorescent **microspheres** bound to one or more analytes of the predetd. no. of analytes, if present in the sample. Fluorescent **microspheres** were prepd. comprising fluorescent nanocrystals ((CdSe)ZnS nanocrystals coated with mercaptoacetic acid) operably bound to magnetic polymeric **microspheres** having antibody (IgG) operably bound thereto. These **microspheres** gave an orange-red emission when excited with light at 360-380 nm.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L207 ANSWER 11 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:792227 CAPLUS
DOCUMENT NUMBER: 135:328951
TITLE: Fluorescent nanocrystal-labeled **microspheres** for fluorescence analyses
INVENTOR(S): Barbera-Guillem, Emilio
PATENT ASSIGNEE(S): Bio-Pixels Ltd., USA
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. 6,114,038. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6309701	B1	20011030	US 2000-577761	20000524
US 6114038	A	20000905	US 1999-372729	19990811
US 6221602	B1	20010424	US 1999-436159	19991109
WO 2001089585	A1	20011129	WO 2001-US16678	20010523

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 1998-107829P P 19981110
US 1999-372729 A2 19990811
US 1998-109626P P 19981124
US 2000-577761 A 20000524
US 2000-633953 A 20000808

AB Provided are a fluorescent **microsphere** comprised of a plurality of fluorescent nanocrystals operably bound to a polymeric **microsphere**, and a method of producing the fluorescent **microspheres** which comprises contacting the polymeric **microsphere** with a plurality of fluorescent nanocrystals under suitable conditions in which the fluorescent naocrystals become operably bound to the polymeric **microsphere**. Also provided is a method of using the fluorescent **microspheres** capable of detg. the presence or absence of a predetd. no. of analytes in a sample by contacting the sample with the fluorescent **microspheres**, and detecting the fluorescence signal **pattern** of excited fluorescent **microspheres** bound to one or more analytes of the predetd. no. of analytes, if present in the sample.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L207 ANSWER 12 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:814381 CAPLUS

DOCUMENT NUMBER: 133:350517
TITLE: Methods of software driven flow sorting for reiterative synthesis cycles
INVENTOR(S): Stewart, Michael; Nanthakumar, Alaganadan; Watson, Andrew
PATENT ASSIGNEE(S): Axys Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000067894	A2	20001116	WO 2000-US12825	20000510
WO 2000067894	A3	20010726		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-134028P P 19990512

AB Methods are provided for synthesizing libraries of complex org. mols. (e.g., polypeptides and oligonucleotides) on labeled particles. A set of particles encoded with varying levels and combinations of dyes, which provide a detectable address, are used as the support for org. synthesis. The addresses of a set of particles is read by flow cytometry and used to classify the **microspheres**. The set of **microspheres** is then sorted into groups by flow cytometry, using a modified look-up table. Monomers are coupled to each **microsphere** in a group, where each group corresponds to a different coupling reaction. The groups are then combined and resorted, and a second round of addn. reactions performed. The reiterative process of sorting into groups and coupling addnl. monomers to the growing oligomer chain is performed for sufficient rounds to provide an oligomer of the desired length. The resulting "**liq . array**" is a set of encoded **microspheres** comprising a library of synthesized oligomers, where each sequence in the oligomer library corresponds to a distinct address of fluorescent output data.

L207 ANSWER 13 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:811317 CAPLUS
DOCUMENT NUMBER: 134:94778
TITLE: Liquid flow through an array-based chemical sensing system
AUTHOR(S): Sohn, Young-Soo; Tsao, Andrew; Anslyn, Eric V.; McDevitt, John Thomas; Shear, Jason B.; Neikirk, Dean P.
CORPORATE SOURCE: Department of Electrical and Computer Engineering, The University of Texas at Austin, Austin, TX, 78712, USA
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2000), 4177(Microfluidic Devices and Systems III), 212-219
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A micromachined fluidic sensor array for the rapid characterization of multiple analytes in soln. was developed. A simple micromachined fluidic

structure for this biol. and chem. agent detection system was designed and fabricated, and the system was tested. Sensing occurs via optical changes to indicator mols. that are attached to polymeric **microspheres** (beads). A sep. charged-coupled- device (CCD) is used for the simultaneous acquisition of the optical data from the selectively arranged beads in micromachined etch cavities. The micromachined bead support structure was designed to be compatible wit this hybrid optical detection system. The structure consists of four layers: cover glass, micromachined silicon, dry film photoresist, and glass substrate. The bottom three layers are fabricated 1st, and the beads are selectively placed into micromachined etch cavities. Finally, the cover glass is applied to confine the beads. This structure uses a hydrophilic surface of the cover glass to draw a liq. sample into the sensor array without moving components, producing a compact, reliable, and potentially low-cost device. The authors have initially characterized fluid flow through a complete chip, showing complete filling of the sample chamber in .apprx.2 s. The test results show that this system may be useful in micro total anal. systems (.mu.-TAS), esp. in single-use biomedical applications.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L207 ANSWER 14 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:569906 CAPLUS
DOCUMENT NUMBER: 131:307526
TITLE: Automation of **yeast** two-hybrid screening
AUTHOR(S): Buckholz, Richard G.; Simmons, Catherine A.; Stuart, Joan M.; Weiner, Michael P.
CORPORATE SOURCE: Department of Molecular Endocrinology, Glaxo Wellcome Research Institute, Research Triangle Park, NC, 27709, USA
SOURCE: Journal of Molecular Microbiology and Biotechnology (1999), 1(1), 135-140
CODEN: JMMBFF; ISSN: 1464-1801
PUBLISHER: Horizon Scientific Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have developed an automated format for screening yeast two-hybrid libraries for protein-protein interactions. The format consists of a **liq. array** in which pooled library subsets of yeast, expressing up to 1000 different cDNAs, are mated to a yeast strain of the opposite mating type, expressing a protein of interest. Interactors are detected by a liq. assay for .beta.-galactosidase following prototrophic selection. The method is demonstrated by the detection of interactions between two encoded yeast RNA polymerase subunits in simulated libraries of varied complexity. To demonstrate its utility for large scale screening of complex cDNA libraries, two nuclear receptor ligand-binding domains were screened through two cDNA libraries arrayed in pooled subsets. Screening these libraries yielded clones which had previously been identified in traditional yeast two hybrid screens, as well as several new putative interacting proteins. The formatting of the cDNA library into pooled subsets lends itself to functional subtraction of the promiscuous pos. class of interactor from the library. Also, the liq. arrayed format enables electronic handling of the data derived from interaction screening, which, together with the automated handling of samples, should promote large-scale proteome anal.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L207 ANSWER 15 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:665942 CAPLUS
DOCUMENT NUMBER: 119:265942
TITLE: Automated continuous and random access analytical system

INVENTOR(S): Clark, Frederic L.; Clift, Gilbert; Hendrick, Kendall B.; Lagocki, Peter A.; Martin, Richard R.; Mitchell, James E.; Moore, Larry W.; Pennington, Charles D.; Walker, Edna S.; et al.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9320450	A1	19931014	WO 1993-US2811	19930324
W: AU, CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9339680	A1	19931108	AU 1993-39680	19930324
EP 632896	A1	19950111	EP 1993-909171	19930324
R: BE, CH, DE, ES, FR, GB, IT, LI				
JP 07506184	T2	19950706	JP 1993-517560	19930324
US 5610069	A	19970311	US 1995-549020	19951027
US 5578494	A	19961126	US 1996-600321	19960213

PRIORITY APPLN. INFO.:

US 1992-859218	A	19920327
US 1992-915162	A2	19920720
US 1992-915163	B2	19920720
US 1992-915164	B2	19920720
US 1992-915166	B2	19920720
US 1992-915167	B2	19920720
US 1992-915168	B2	19920720
US 1992-916425	B2	19920720
US 1992-916551	B2	19920720
US 1992-916556	B2	19920720
US 1992-916737	A2	19920720
US 1992-917253	B2	19920720
US 1992-917634	B2	19920720
US 1993-27268	B2	19930318
US 1993-27269		19930318
US 1993-27270	B2	19930318
US 1993-27387	B2	19930318
US 1993-27388	B2	19930318
US 1993-27481	B2	19930318
US 1993-27482		19930318
WO 1993-US2811	A	19930324
US 1993-126411	B2	19930924
US 1994-176632	B1	19940103
US 1994-176871	B1	19940103

AB An automated, continuous and random access anal. system is disclosed, having app. and methodol. capable of simultaneously performing multiple assay of liq. samples using different assay methodologies, and providing continuous and random access while performing a plurality of different assays on the same or different samples during the same time period. Also disclosed is a method of operating an automated continuous and random access anal. system capable of simultaneously effecting multiple assays of a plurality of liq. samples, wherein scheduling of various assays of the plurality of liq. samples is followed by creating a unit dose **disposable** and sep. transferring a 1st liq. sample and reagents to a reaction vessel without initiation of an assay reaction sequence, follows by phys. transfer of the unit dose **disposable** to a processing workstation, whereby a mixt. of the unit dose **disposable** reagents and sample are achieved during incubation. The system is capable of performing >1 scheduled assay in any order, and assays where more than such scheduled assays are presented. The

automated, continuous and random access anal. system is also capable of analyzing the incubated reaction mixts. independently and individually by .gtoreq.2 assay procedures. Diagrams of the app. are included. The system is particularly useful for immunoassays.

L207 ANSWER 16 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:665941 CAPLUS
DOCUMENT NUMBER: 119:265941
TITLE: Automated continuous and random access analytical system and components thereof
INVENTOR(S): Clark, Frederic L.; Clift, Gilbert; Hendrick, Kendall B.; Kanewske, William J., III
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: PCT Int. Appl., 195 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9320441	A1	19931014	WO 1993-US2791	19930324
W: AU, CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9339350	A1	19931108	AU 1993-39350	19930324
JP 07505476	T2	19950615	JP 1993-517551	19930324
US 5536471	A	19960716	US 1994-176752	19940103
US 5610069	A	19970311	US 1995-549020	19951027
US 5578494	A	19961126	US 1996-600321	19960213
US 6190617	B1	20010220	US 1997-956939	19971023

PRIORITY APPLN. INFO.:

US 1992-859218	A	19920327
US 1992-915164	A	19920720
US 1992-915166	A	19920720
US 1992-915167	A	19920720
US 1992-915168	A	19920720
US 1992-916425	A	19920720
US 1992-916551	A	19920720
US 1992-916556	A	19920720
US 1992-917253	A	19920720
US 1992-917634	A	19920720
US 1993-27269	A	19930318
US 1993-27482	A	19930318
US 1992-126411	XX	19920720
US 1992-915162	A2	19920720
US 1992-915163	B2	19920720
US 1992-916737	A2	19920720
US 1993-27268	B2	19930318
US 1993-27270	B2	19930318
US 1993-27387	B2	19930318
US 1993-27388	B2	19930318
US 1993-27481	B2	19930318
WO 1993-US2791	A	19930324
US 1993-126411	A2	19930924
US 1994-176632	B1	19940103
US 1994-176871	B1	19940103
US 1996-713553	A3	19960909

AB An automated, continuous and random access anal. system is disclosed, having app. and methodol. capable of simultaneously performing multiple assays of liq. samples using different assay methodol., and providing continuous and random access while performing a plurality of of different assays on the same or different samples during the same time period. A method is also disclosed of operating an automated continuous and random

access anal. system capable of simultaneously effecting multiple assays of a plurality of liq. samples., wherein scheduling of various assays of the plurality of liq. samples is followed by creating a unit dose **disposable** and sep. transferring a 1st liq. sample, reagents to a reaction vessel without initiation of an assay reaction sequence, followed by phys. transfer of the unit dose **disposable** to a process workstation, whereby a mixt. of the unit dose **disposable** reagents and sample are achieved during incubation. The system is capable of performing >1 scheduled assay in any order, and assays where more than such scheduled assays are presented. The automated, continuous and random access anal. system is also capable of analyzing the incubated reaction mixts. independently and individually by >2 assay procedures. The anal. system is particularly useful for immunoassays. Diagrams of the app. are included.

L207 ANSWER 17 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:665940 CAPLUS
DOCUMENT NUMBER: 119:265940
TITLE: Automated continuous and random access analytical system and components thereof
INVENTOR(S): Clark, Frederic L.; Clift, Gilbert; Hendrick, Kendall B.; Kanewske, William J., III; Lagocki, Peter A.; Martin, Richard R.; Mitchell, James E.; Moore, Larry W.; Pennington, Charles D.; Et, Al.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9320440	A1	19931014	WO 1993-US2644	19930324
W: AU, CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9339290	A1	19931108	AU 1993-39290	19930324
JP 07505473	T2	19950615	JP 1993-517517	19930324
US 5536471	A	19960716	US 1994-176752	19940103
US 5610069	A	19970311	US 1995-549020	19951027
US 5578494	A	19961126	US 1996-600321	19960213
US 6190617	B1	20010220	US 1997-956939	19971023

PRIORITY APPLN. INFO.:

US 1992-859218	A	19920327
US 1993-27268	A	19930318
US 1993-27270	A	19930318
US 1993-27387	A	19930318
US 1993-27388	A	19930318
US 1993-27481	A	19930318
US 1992-126411	XX	19920720
US 1992-915162	A2	19920720
US 1992-915163	B2	19920720
US 1992-915164	B2	19920720
US 1992-915166	B2	19920720
US 1992-915167	B2	19920720
US 1992-915168	B2	19920720
US 1992-916425	B2	19920720
US 1992-916551	B2	19920720
US 1992-916556	B2	19920720
US 1992-916737	A2	19920720
US 1992-917253	B2	19920720
US 1992-917634	B2	19920720
US 1993-27269	A2	19930318

US 1993-27482	A2	19930318
WO 1993-US2644	A	19930324
US 1993-126411	A2	19930924
US 1994-176632	B1	19940103
US 1994-176871	B1	19940103
US 1996-713553	A3	19960909

AB An automated, continuous and random access anal. system is disclosed, having app. and methodol. capable of simultaneously performing multiple assays of liq. samples using different assay methodol., and providing continuous and random access while performing a plurality of different assays on the same or different samples during the same time period. A method is also disclosed of operating an automated continuous and random access anal. system capable of simultaneously effecting multiple assays of a plurality of liq. samples., wherein scheduling of various assays of the plurality of liq. samples is followed by creating a unit dose **disposable** and sep. transferring a 1st liq. sample, reagents to a reaction vessel without initiation of an assay reaction sequence, followed by phys. transfer of the unit dose **disposable** to a process workstation, whereby a mixt. of the unit dose **disposable** reagents and sample are achieved during incubation. The system is capable of performing >1 scheduled assay in any order, and assays where more than such scheduled assays are presented. The automated, continuous and random access anal. system is also capable of analyzing the incubated reaction mixts. independently and individually by >2 assay procedures. The anal. system is particularly useful for immunoassays. Diagrams of the app. are included.

L207 ANSWER 18 OF 51 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:528518 CAPLUS
DOCUMENT NUMBER: 119:128518
TITLE: Ferroelectric liquid-crystal element and liquid-crystal display device (LCD) therefrom
INVENTOR(S): Takao, Hideaki; Kojima, Makoto; Asaoka, Masanobu
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05002163	A2	19930108	JP 1991-313115	19911101
US 5734456	A	19980331	US 1994-218034	19940325

PRIORITY APPLN. INFO.:

JP 1990-308722	19901116
JP 1991-313115	19911101
US 1991-791235	19911113

AB A ferroelec. liq.-crystal element comprising a ferroelec. liq. crystal sandwiched between a pair of transparent electrode-bearing substrate and a color filter at least between one of the electrodes and the substrate is characterized in that surface roughness gap of the color filter for each pixel is .ltoreq.0.1 .mu.m. Preferably, the color filter is made of an arom. polyamide or polyimide resin contg. a photosensitive moiety. Preferably, the color filter may contain transparent **microparticles** or pigments. The LCD device useful as a **liq.** crystal-shutter **array** is also claimed.

L207 ANSWER 19 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 2001:32530068 BIOTECHNO
TITLE: Simultaneous measurement of antibodies to three HIV-1 antigens in newborn dried blood-spot specimens using a multiplexed **microsphere**-based immunoassay

AUTHOR: Bellisario R.; Colinas R.J.; Pass K.A.
CORPORATE SOURCE: R. Bellisario, Division of Genetic Disorders, Wadsorth Center, New york State Department Health, Albany, NY 12201-0509, United States.
E-mail: bellisar@wadsworth.org
SOURCE: Early Human Development, (2001), 64/1 (21-25), 8 reference(s)
CODEN: EHDEDN ISSN: 0378-3782
PUBLISHER ITEM IDENT.: S0378378201001670
DOCUMENT TYPE: Journal; Article
COUNTRY: Ireland
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We developed a fluorescent immunoassay to simultaneously measure antibodies to three HIV-1 antigens from newborn dried blood-spot specimens. The multiplexed assay uses fluorescent **microspheres** and a flow analyzer. The procedure is sensitive, precise and accurate, and can be expanded to simultaneously measure additional multiple analytes from a single specimen. Copyright .COPYRGT. 2001 Elsevier Science Ireland Ltd.

L207 ANSWER 20 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1997:27474854 BIOTECHNO
TITLE: Detection of 2,4-dichlorophenoxyacetic acid using a fluorescence immunoanalyzer
AUTHOR: Rogers K.R.; Kohl S.D.; Riddick L.A.; Glass T.
CORPORATE SOURCE: K.R. Rogers, US Environmental Protection Agency, Natl. Exposure Research Laboratory, Las Vegas, NV 89193, United States.
SOURCE: Analyst, (1997), 122/10 (1107-1111), 20 reference(s)
CODEN: ANALAO ISSN: 0003-2654
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A flow immunoassay method for the measurement of 2,4-dichlorophenoxyacetic acid (2,4-D) was developed. The competitive fluorescence immunoassay relies on the use of antibody- or antigen-coated poly(methyl methacrylate) particles (98 .mu.m diameter) as a renewable solid phase. The assay exhibits a dynamic range of 0.1-100 .mu.g l.sup.-.sup.1 using a monoclonal antibody or alternatively 10 .mu.g l.sup.-.sup.1 to 10 mg l.sup.-.sup.1 using commercially available antiserum. The assay is demonstrated in buffered saline solution as well as in aquatic environmental media. The relative errors for the environmental matrices were similar to those for the buffer control. The precision of concentration values calculated at 1 mg l.sup.-.sup.1 (for the assay using antiserum) were .+-. 0.28, .+-. 0.27 and .+-. 0.43 mg l.sup.-.sup.1 for the buffer, well water and river water matrices, respectively. The method shows cross-reactivity with compounds of closely related structure but little cross-reactivity with compounds dissimilar in structure to 2,4-D. The proposed automated competitive immunoassay method is rapid (between 7 and 15 min per assay), simple and potentially **portable**.

L207 ANSWER 21 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1993:23245990 BIOTECHNO
TITLE: Time-resolved immunofluorometric assay of human growth hormone
AUTHOR: Albertsson-Wikland K.; Jansson C.; Rosberg S.; Novamo A.
CORPORATE SOURCE: Department of Pediatrics, Intl. Pediatric Growth Res. Centre, University of Goteborg,S-416 85 Goteborg, Sweden.

Searched by Barb O'Bryen, STIC 308-4291

SOURCE: Clinical Chemistry, (1993), 39/8 (1620-1625)
CODEN: CLCHAU ISSN: 0009-9147
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We describe a time-resolved immunofluorometric assay (trIFMA) for human growth hormone (hGH), in which monoclonal antibody (mAb)-coated microtiter strip wells and a europium (Eu) chelate-labeled mAb are used. We compare the new trIFMA, in which two mAbs are used, with an immunoradiometric assay (IRMA) in which polyclonal antibodies are used. Serum samples (n = 185) from 36 children with various diagnoses were analyzed. In addition, 24-h profile samples (72 per child) from 39 children were analyzed. The trIFMA was more sensitive (detection limit, 0.03 mIU/L) than existing IRMAs. Both the intra- and interassay CVs were <= 10.6% for hGH concentrations between 1 and 100 mIU/L. The trIFMA is technically simple and rapid, requires no centrifugation or separation reagent, and has a counting time of only 1 s per sample. In addition, the Eu label is nontoxic, presents no waste-**disposal** problems, and has a long shelf-life. Finally, the assay requires only small volumes of serum (25 .mu.L), which is of considerable importance in pediatric use. The mAbs used for the trIFMA selectively bind the 22-kDa form of hGH, with the result that the assay detects about 80% of the amount detected by the polyclonal IRMA.

L207 ANSWER 22 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1983:13106870 BIOTECHNO
TITLE: Inexpensive double-antibody fluoroimmunoassay for aminoglycoside antibiotics, phenytoin, and theophylline in serum
AUTHOR: Kurtz M.J.; Billings M.; Koh T.; et al.
CORPORATE SOURCE: Res. Dev. Dep., Ocean Sci., Inc., Anaheim, CA 92805, United States.
SOURCE: Clinical Chemistry, (1983), 29/6 (1015-1019)
CODEN: CLCHAU
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AB We describe simple, clinically useful double-antibody fluoroimmunoassays for amikacin, gentamicin, tobramycin, theophylline, and phenytoin. The fluorescent tracers were prepared by conjugation to fluorescein isothiocyanate; the antisera were raised in rabbits. A simple filter fluorometer and **disposable** culture tubes are used. The tracer, sample and first and second antibodies are combined and incubated at room temperature for 30 min. A precipitation-acceleration buffer is added, the samples are centrifuged, and the fluorescence of the supernate is measured directly in the assay tube without decantation. Interferences, usually negligible, can be corrected for by use of a sample blank. Results compare favorably in performance with various commercially available RIA and enzyme immunoassays.

L207 ANSWER 23 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1981:11079259 BIOTECHNO
TITLE: Direct determination of propranolol in serum or plasma by fluoroimmunoassay
AUTHOR: Al-Hakiem M.H.H.; White G.W.; Smith D.S.; Landon J.
CORPORATE SOURCE: Dept. Chem. Pathol., St Bartholomew's Hosp., London EC1A 7HL, United Kingdom.
SOURCE: Therapeutic Drug Monitoring, (1981), 3/2 (159-165)
CODEN: TDMODV
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English

AB A fluoroimmunoassay for the determination of serum or plasma levels of propranolol was developed using antibodies to propranolol coupled to magnetizable solid-phase particles and fluorescein-labeled propranolol as tracer. The method was sufficiently sensitive, precise, and specific for application to routine monitoring of propranolol therapy, and gave good correlation (r = 0.99) with a widely used ultraviolet fluorometric method in the assay of patients' specimens. The fluoroimmunoassay involves the same instrumentation as the fluorometric assay and has practical advantages, including greater sensitivity (only 100 .mu.l of sample required), avoidance of an extraction step, and visible-wavelength fluorometry, which permits the use of **disposable** plastic apparatus throughout the entire procedure.

L207 ANSWER 24 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1981:11096126 BIOTECHNO
TITLE: Sequential fluoroimmunoassay for measurement of pregnancy specific .beta..sub.1 glycoprotein using antibody coupled to magnetisable particles
AUTHOR: Al-Ani A.T.M.; Al-Hakiem M.H.H.; Chard T.
CORPORATE SOURCE: Dept. Obstet. Gynaecol., St Bartholomew's Hosp. Med. Coll., London EC1, United Kingdom.
SOURCE: Clinica Chimica Acta, (1981), 112/1 (91-97)
CODEN: CCATAR
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
AB A direct, sequential fluorimmunoassay has been developed for the determination of serum levels of pregnancy specific .beta..sub.1 glycoprotein (SP.sub.1). The method employs rabbit anti-SP.sub.1 serum coupled to magnetisable cellulose-iron oxide particles and fluorescein-labelled SP.sub.1. Serum samples or standards are incubated with magnetisable solid phase anti-SP.sub.1 for 30 min. After magnetic sedimentation of the particles, the supernate, which includes endogenous fluorophores and other interfering factors, is discarded. Fluorescein-labelled SP.sub.1 is then added and incubated for a further 45 min; the particles are again sedimented and the fluorescence of the labelled SP.sub.1 remaining in the supernate is estimated. This reading relates directly to the SP.sub.1 content of the original sample. The entire procedure, including fluorometry, is performed within a single **disposable** polystyrene test tube and is sufficiently simple and reliable for routine application. The sensitivity, specificity and precision is very similar to that of radioimmunoassay, and the results correlate closely with those of the radioimmunoassay (r=0.9887).

L207 ANSWER 25 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1980:11238587 BIOTECHNO
TITLE: Magnetizable solid-phase fluoroimmunoassay of thyroxine by a sequential addition technique
AUTHOR: Nargessi R.D.; Ackland J.; Hassan M.; et al.
CORPORATE SOURCE: Dept. Chem. Pathol., St Bartholomew's Hosp., London EC1A 7HL, United Kingdom.
SOURCE: Clinical Chemistry, (1980), 26/12 (1701-1703)
CODEN: CLCHAU
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AB We describe a simple fluoroimmunoassay for the determination of thyroxine concentrations in serum. The method, 'sequential addition, separation fluoroimmunoassay', involves both thyroxine labeled with fluorescein and magnetizable cellulose/iron oxide particles to which antibodies to thyroxine have been covalently linked. Serum sample or standard is incubated with an excess of the solid-phase antibody; the particles, which now carry most of the antigen in the sample, are sedimented onto a

magnet and the supernate, which contains endogenous fluorophores and other interfering factors, is removed and discarded. Excess labeled thyroxine is then added, and, after incubation, the fluorescence in the supernate (free fraction), which is related directly to the amount of thyroxine in the sample, is measured. For the whole procedure, including fluorometry, each sample is treated entirely within **disposable** polystyrene test tubes. Correlation studies with two different radioimmunoassays showed good agreement.

L207 ANSWER 26 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1980:10035228 BIOTECHNO
TITLE: Magnetizable solid-phase fluoroimmunoassay of phenytoin in **disposable** test tubes
AUTHOR: Kamel R.S.; Landon J.; Smith D.S.
CORPORATE SOURCE: Dept. Chem. Pathol., St Bartholomew's Hosp., London EC1A 7HL, United Kingdom.
SOURCE: Clinical Chemistry, (1980), 26/9 (1281-1284)
CODEN: CLCHAU
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AB The authors developed a fluoroimmunoassay for phenytoin in serum or plasma, based on the magnetic separation technique. The method involves sheep anti-phenytoin serum coupled to magnetizable cellulose/iron oxide particles, with a fluorescein-labeled phenytoin analog as tracer. After magnetic sedimentation of the solid phase from assay mixtures, the free fraction of the tracer is aspirated, removing endogenous fluorophores and other interfering components of the sample. The antibody-bound tracer is then eluted from the solid phase into a methanolic buffer medium and quantitated fluorometrically. The entire procedure, including fluorometry, is performed within **disposable** polystyrene test tubes. The assay involves only simple reagents and equipment, and correlates closely with established radioimmunoassay (r = 0.97) and ad gas-liquid chromatgraphic (r = 0.98) techniques.

L207 ANSWER 27 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 2001:32142247 BIOTECHNO
TITLE: The release of prion protein from platelets during storage of apheresis platelets
AUTHOR: Bessos H.; Drummond O.; Prowse C.; Turner M.; MacGregor I.
CORPORATE SOURCE: Dr. H. Bessos, National Science Laboratory, 21 Ellen's Glen Road, Edinburgh EH17 7QT, United Kingdom.
E-mail: Bessos@compuserve.com
SOURCE: Transfusion, (2001), 41/1 (61-66), 30 reference(s)
CODEN: TRANAT ISSN: 0041-1132
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AB BACKGROUND: Recent studies using a time-resolved fluoroimmunoassay method (dissociation-enhanced lanthanide fluoroimmunoassay) showed that platelets and plasma are the main reservoir of the normal isoform of cell-associated prion protein (PrP.sup.c) in human blood. The aims of the present study were to monitor PrP.sup.c levels in various fractions of apheresis platelets during storage by using the DELFIA method and to assess the association of this release with alpha-granule protein .beta.-thromboglobulin and cytoplasmic LDH. STUDY DESIGN AND METHODS: Units of apheresis platelets (n = 6) were obtained from volunteer donors by the use of a cell separator and stored up to 10 days. Samples (7-9 mL) were aseptically collected from each unit on storage Days 1, 2, 3, 4, 5, 8, and 10. Platelet-poor plasma and apheresis platelets were prepared and the former split into two fractions, one centrifuged at 40,000 x g for 2

hours at 4.degree.C to remove **microparticles**. The spun **microparticles**, apheresis platelets and platelet samples, platelet-poor plasma, and high-spun plasma fractions were stored in a frozen state until they were tested. RESULTS: The results showed that the mean overall levels of PrP.sup.c throughout storage remained within 15 percent of Day 1 levels. In contrast, the mean cellular levels in platelets significantly decreased to 46 percent of Day 1 levels by Day 10 of storage ($p<0.01$), while the corresponding levels in plasma significantly rose as much as 329 percent ($p<0.01$). Moreover, although **microparticle**-bound PrP.sup.c was released during storage, it was increasingly superseded by soluble protein. PrP.sup.c and .beta.-thromboglobulin release exhibited very similar patterns ($p<0.01$). In contrast, LDH showed a significant increase in high-spun plasma only toward the end of the storage period ($p<0.01$). CONCLUSION: These results indicate that PrP.sup.c is released from platelets during the storage of apheresis platelets and that this release is probably due mainly to platelet activation and alpha-granule release in the first few days of storage. Moreover, the released PrP.sup.c is increasingly composed of soluble proteins, as the storage period exceeds 5 days.

L207 ANSWER 28 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 2000:30072789 BIOTECHNO
TITLE: New electrochemical assay of alkaline phosphatase using ascorbic acid 2-phosphate and its application to enzyme immunoassay
AUTHOR: Kokado A.; Arakawa H.; Maeda M.
CORPORATE SOURCE: M. Maeda, School of Pharmaceutical Sciences, Showa University, 1-5-8 Hatanodai, Shinagawa-Ku, Tokyo 142-8555, Japan.
E-mail: maedam@pharm.showa-u.ac.jp
SOURCE: Analytica Chimica Acta, (2000), 407/1-2 (119-125), 28 reference(s)
CODEN: ACACAM ISSN: 0003-2670
PUBLISHER ITEM IDENT.: S000326709900793X
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An alternative substrate is described for an enzyme immunoassay with electrochemical detection. Alkaline phosphatase (ALP) activity is determined by using ascorbic acid 2-phosphate (AsA-P) as substrate. ALP-generated-AsA is detected amperometrically at a glassy carbon electrode in a flow injection system at +400mV. The optimum assay conditions (pH, incubation time and concentration of reagent) are examined for the ALP assay. The detection limit of ALP was 160 amol per assay (7amol per injection). On electrochemical detection, many ALP assays using p-aminophenyl phosphate or phenyl phosphate as substrate have been reported. The sensitivity for ALP by the proposed method is almost the same as those of the methods for ALP using p-aminophenyl phosphate or phenyl phosphate. The proposed method was applied to the enzyme immunoassay of human chorionic gonadotropin (hCG) using ALP as a label enzyme. The detection limit of hCG was 2mIUml.sup.-.sup.1. Comparison of the results obtained by the proposed electrochemical EIA and time-resolved fluoroimmunoassay showed excellent agreement ($r=0.997$, $n=50$). The proposed electrochemical EIA could be performed within 4h, and could be useful for routine assay in clinical diagnosis. Copyright (C) 2000 Elsevier Science B.V.

L207 ANSWER 29 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1994:24054482 BIOTECHNO
TITLE: A particle concentration fluorescence immunoassay for Lp(a)
AUTHOR: Kotte B.A.; Bren N.D.

CORPORATE SOURCE: Mayo Clinic, 200 First Street SW,Rochester, MN 55905, United States.
SOURCE: Chemistry and Physics of Lipids, 0(1994), 67-68/-(249-256)
CODEN: CPLIA4 ISSN: 0009-3084
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: Ireland
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The quantitation of Lp(a) by immunoassay presents a major technical problem, because the molecular mass of the (a) protein of Lp(a) can vary between 419 000 and 838 000 Da and this variability is determined by at least 24 alleles of the (a) gene. In an attempt to overcome this problem, we have developed an assay that is independent of variation of the size of (a). The assay utilizes a mixture of monoclonal antibodies to (a) which do not react to plasminogen or to apolipoprotein (apo) B. These antibodies are bound to inert microscopic beads to capture the Lp(a) particles. Subsequently, a fluorescein-labeled monoclonal antibody to apo B is used for detection and quantitation. The assay is done with special microtiter plates containing filters so that the particles can be thoroughly washed after capture on the **microbeads**. Because Lp(a) particles contain only one apo B particle and the molecular weight of apo B is constant, the assay is not affected by variation in the size of apo(a). By binding the mixture of monoclonal antibodies to inert beads, it is possible to greatly increase the amount of antibody bound to an exposed surface and thus increase the sensitivity of the assay. A mixture of monoclonal antibodies can be used to increase the affinity of the capture step of the assay. The assay can be completed in 4 h and has a wide working range. In addition, we have developed a method for standardization that expresses results in moles per liter rather than in milligrams per deciliter, in order to provide a value. that relates to the concentration (number or particles per unit volume) of Lp(a) particles. With this assay it is hoped that it will be possible to clearly separate those functional effects due to variation in the size of apo(a) from those due to variation in the concentration of Lp(a) particles.

L207 ANSWER 30 OF 51 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1982:12026694 BIOTECHNO
TITLE: Development of fluoroimmunoassays for the determination of individual or combined levels of procainamide and N-acetylprocainamide in serum
AUTHOR: Al-Hakiem M.H.H.; Smith D.S.; Landon J.
CORPORATE SOURCE: Dep. Chem. Pathol., St Bartholomew's Hosp., London EC1, United Kingdom.
SOURCE: Journal of Immunoassay, (1982), 3/1 (91-110)
CODEN: JOUIDK
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English

AB A fluoroimmunoassay has been developed for the simultaneous determination of serum levels of procainamide and its active metabolite N-acetylprocainamide. It employs procainamide linked through its aromatic amino group to fluorescein isothiocyanate as tracer and an antiserum raised against procainamide conjugated to human thyroglobulin through the same position. Separation is rapidly and simply achieved by covalently linking the antiserum to magnetisable **microparticles** and use of a magnet. Specific magnetisable particle fluoroimmunoassays were also developed for procainamide and for N-acetylprocainamide by the use of suitable immunogens and fluorescein-labelled tracers. That for procainamide uses an antiserum raised to a procainamide-enzyme conjugate and fluorescein-labelled p-aminobenzoic acid while the fluoroimmunoassay for N-acetylprocainamide employs an antiserum against a

N-acetylprocainamide-enzyme conjugate and fluorescein-labelled p-acetamidobenzoic acid.

L207 ANSWER 31 OF 51 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002092875 EMBASE
TITLE: Identification of Cryptosporidium parvum oocysts by an artificial neural network approach.
AUTHOR: Widmer K.W.; Oshima K.H.; Pillai S.D.
CORPORATE SOURCE: S.D. Pillai, Poultry Science Department, Texas A and M University, College Station, TX 77843, United States. spillai@poultry.tamu.edu
SOURCE: Applied and Environmental Microbiology, (2002) 68/3 (1115-1121).
Refs: 19
ISSN: 0099-2240 CODEN: AEMIDF
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
027 Biophysics, Bioengineering and Medical Instrumentation
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Microscopic detection of Cryptosporidium parvum oocysts is time-consuming, requires trained analysts, and is frequently subject to significant human errors. Artificial neural networks (ANN) were developed to help identify immunofluorescently labeled C. parvum oocysts. A total of 525 digitized images of immunofluorescently labeled oocysts, fluorescent microspheres, and other miscellaneous nonoocyst images were employed in the training of the ANN. The images were cropped to a 36- by 36-pixel image, and the cropped images were placed into two categories, oocyst and nonoocyst images. The images were converted to grayscale and processed into a histogram of gray color pixel intensity. Commercially available software was used to develop and train the ANN. The networks were optimized by varying the number of training images, number of hidden neurons, and a combination of these two parameters. The network performance was then evaluated using a set of 362 unique testing images which the network had never "seen" before. Under optimized conditions, the correct identification of authentic oocyst images ranged from 81 to 97%, and the correct identification of nonoocyst images ranged from 78 to 82%, depending on the type of fluorescent antibody that was employed. The results indicate that the ANN developed were able to generalize the training images and subsequently discern previously unseen oocyst images efficiently and reproducibly. Thus, ANN can be used to reduce human errors associated with the microscopic detection of Cryptosporidium oocysts.

L207 ANSWER 32 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2002:349217 SCISEARCH
THE GENUINE ARTICLE: 540BH
TITLE: Detection of HCV core antigen in human serum and plasma with an automated chemiluminescent immunoassay
AUTHOR: Muerhoff A S (Reprint); Jiang L; Shah D O; Gutierrez R A; Patel J; Garolis C; Kyrk C R; Leckie G; Frank A; Stewart J L; Dawson G J
CORPORATE SOURCE: Abbott Labs, Expt Biol Res, Dept 90D, Abbott Diagnost Div, NL-L3, 1404 Sheridan Rd, N Chicago, IL 60064 USA (Reprint); Abbott Labs, Expt Biol Res, Dept 90D, Abbott Diagnost Div, N Chicago, IL 60064 USA; Abbott Labs, Mol Diagnost Assay Dev, Abbott Diagnost Div, N Chicago, IL 60064 USA; Abbott Labs, PRISM Res & Dev, Abbott Diagnost Div, N Chicago, IL 60064 USA

COUNTRY OF AUTHOR: USA
SOURCE: TRANSFUSION, (MAR 2002) Vol. 42, No. 3, pp. 349-356.
Publisher: AMER ASSOC BLOOD BANKS, 8101 GLENBROOK RD, BETHESDA, MD 20814-2749 USA.
ISSN: 0041-1132.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 30

ABSTRACT:

BACKGROUND: Currently, the detection of HCV infection in blood donors relies on the ability of immunoassays to detect circulating HCV antibodies. However, a significant delay exists between the time of infection and the development of antibodies. This delay (window period) can last up to 70 days. The introduction of NAT for the detection of HCV RNA has reduced this window period dramatically. However, NAT is labor Intensive, prone to contamination, and expensive as compared with standard serologic tests.

STUDY DESIGN AND METHODS: An automated, **microparticle**-based chemiluminescent assay for the detection of HCV core antigen in human serum and plasma was developed. The specificity and sensitivity of this prototype assay were evaluated by testing a population of normal blood donors and commercially available seroconversion panels.

RESULTS: The HCV core antigen assay exhibited a 99.9-percent specificity by detecting a single repeatably reactive sample out of 1004 normal donors tested. Assay sensitivity was determined by comparing the HCV core antigen detection rate with the antibody seroconversion profile and the rate of HCV RNA detection. Among 15 seroconversion panels examined, core antigen was detected in 69 of 70 antibody-negative and/or RNA-positive samples for a sensitivity relative to NAT of 98.6 percent.

CONCLUSION: These data indicate that the automated, **microparticle** -based chemiluminescent HCV core antigen assay can reduce the window period for detection of potentially infected blood donors by 32.7 days, and it represents a viable alternative to HCV RNA testing.

CATEGORY: HEMATOLOGY
SUPPL. TERM PLUS: HEPATITIS-C **VIRUS**; **FLUORESCENT** ENZYME-**IMMUNOASSAY**; QUANTIFICATION; PROTEIN; SENSITIVITY; INTERFERON; INFECTION; GENOTYPES; EFFICACY; VIREMIA

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
AOYAGI K	1999	37	1802	J CLIN MICROBIOL
BUKH J	1992	89	187	P NATL ACAD SCI USA
BUSCH M P	2000	40	143	TRANSFUSION
BUSCH M P	1995	35	903	TRANSFUSION
COUROUCE A M	2000	40	1198	TRANSFUSION
DAWSON G J	2000	40	S83	TRANSFUSION S
DICKSON R C	1999	68	1512	TRANSPLANTATION
FELSENSTEIN J	1993			PHYLIP INFERENCE PAC
HOTTENTRAGER B	2001	34	A1327	HEPATOLOGY
HOTTENTRAGER B	2001	34	128	HEPATOLOGY
IIJIMA A	2000	15	311	J GASTROEN HEPATOL
KHALIL O S	1991	37	1540	CLIN CHEM
KOBAYASHI M	1999	34	94	J GASTROENTEROL
KOMATSU F	1999	19	375	LIVER
LAUER G M	2001	345	41	NEW ENGL J MED
MUERHOFF A S	1997	71	8952	J VIROL
ORITO E	1996	39	876	GUT
PAWLOTSKY J M	2001	34	A1328	HEPATOLOGY
PAWLOTSKY J M	2001	34	128	HEPATOLOGY
PETERSON J	2000	78	80	VOX SANG
ROTH W K	1999	353	359	LANCET
ROTH W K	2000	78	257	VOX SANG S2

SHAH D O	2001		297	IMMUNOASSAY HDB
SHIRATORI Y	1997	27	437	J HEPATOL
SIMMONDS P	1993	74	2391	J GEN VIROL
STRAMER S L	2000	40	1165	TRANSFUSION
STRAMER S L	1998	38	S70	TRANSFUSION S
TANAKA E	2000	32	388	HEPATOLOGY
TANAKA T	1995	23	742	J HEPATOL
TOKITA H	2000	38	3450	J CLIN MICROBIOL

L207 ANSWER 33 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 1999:681705 SCISEARCH
THE GENUINE ARTICLE: 231KH
TITLE: Toxicological analysis in agitated patients
AUTHOR: Moritz F (Reprint); Goulle J P; Girault C; Clarot F; Droy J M; Muller J M
CORPORATE SOURCE: CTR HOSP UNIV, HOP CHARLES NICOLLE, DEPT EMERGENCY MED, 1 RUE GERMONT, F-76031 ROUEN, FRANCE (Reprint); HOP JACQUES MONOD, PHARMACOKINET TOXICOL & BIOCHEM LAB, F-76083 LE HAVRE, FRANCE; CTR HOSP, HOP CHARLES NICOLLE, MED INTENS CARE UNIT, F-76031 ROUEN, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: INTENSIVE CARE MEDICINE, (AUG 1999) Vol. 25, No. 8, pp. 852-854.
Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0342-4642.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: CLIN
LANGUAGE: English
REFERENCE COUNT: 12
ABSTRACT:

Objective: To assess the toxicological etiologies in agitated patients and to evaluate their initial clinical diagnosis in the light of toxicological results analysis.

Design: Prospective clinical study.

Setting: Emergency Department (ED) in a 2,650-bed University Hospital.

Patients: Fifty-eight consecutively enrolled patients admitted to the ED in agitated states over a 6-month period.

Measurements nod results: All patients underwent laboratory tests including blood glucose, ethanol and serum drug screening. Toxicology tests were conducted by **fluorescence** polarization **immunoassay** and confirmed by high performance **liquid** chromatography/diode ***array*** detector and gas chromatography-mass spectrometry. The physician's initial diagnosis was evaluated in the light of toxicological analysis results. Serum toxicological analysis revealed that 50/58 patients were under the influence of alcohol andlor a drug. Benzodiazepines (22/58), selective serotonin reuptake inhibitors (5/58) and opiates (4/58) were the most frequently observed. The initial clinical diagnosis was alcohol intoxication in 39 patients, although 1 patient was not under the influence of alcohol and 16 also had benzodiazepine in their sera. Moreover, the diagnosis of serotonin syndrome was overlooked in two patients.

Conclusion: Most agitated patients were under the influence of alcohol and/or a drug. Benzodiazepine alone or in association with alcohol was surprisingly frequent. A serotonin syndrome may explain the agitation state.

CATEGORY: EMERGENCY MEDICINE & CRITICAL CARE
SUPPLEMENTARY TERM: agitated patients; mass spectrometry; benzodiazepine; alcohol; selective serotonin reuptake inhibitor; emergency department
SUPPL. TERM PLUS: SEROTONIN SYNDROME; AGGRESSION
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)

*OBS REG SANT	1998			SUIV TOX US DROG IL
ANDERSON G M	1995	1	44	ISR J PSYCHIAT RELAT
CLINTON J E	1987	16	319	ANN EMERG MED
FEIERABEND R H	1995	41	289	J FAM PRACTICE
HALL R C	1981	11	99	BR J CLIN PHARM S1
LANE R	1997	17	208	J CLIN PSYCHOPHARM
MARTIN R M	1997	314	646	BRIT MED J
MICZEK K A	1997	13	139	RECENT DEV ALCOHOL
OSTERLOH J D	1990	152	506	W J MED
RICHARDS J R	1998	16	567	J EMERGENCY MED
STERNBACH H	1991	148	705	AM J PSYCHIAT
YUDOFSKY S C	1986	143	35	AM J PSYCHIAT

L207 ANSWER 34 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 1998:128895 SCISEARCH
THE GENUINE ARTICLE: YV542
TITLE: Elevated free phenytoin and free valproic acid concentrations in sera of patients infected with human immunodeficiency **virus**
AUTHOR: Dasgupta A (Reprint); McLemore J L
CORPORATE SOURCE: UNIV TEXAS, HLTH SCI CTR, DEPT PATHOL & LAB MED, 6431 FANNIN, MSB 2-292, HOUSTON, TX 77030 (Reprint); UNIV NEW MEXICO, HLTH SCI CTR, DEPT PATHOL, ALBUQUERQUE, NM 87131
COUNTRY OF AUTHOR: USA
SOURCE: THERAPEUTIC DRUG MONITORING, (FEB 1998) Vol. 20, No. 1, pp. 63-67.
Publisher: LIPPINCOTT-RAVEN PUBL, 227 EAST WASHINGTON SQ, PHILADELPHIA, PA 19106.
ISSN: 0163-4356.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 14
ABSTRACT:

Seizures are common in patients infected with human immunodeficiency ***virus*** (HIV). Phenytoin and valproic acid are common anticonvulsants, and both drugs are strongly bound to serum albumin. Because patients infected with HIV are often on polytherapy, using homeopathic medicines, and may also have hypoalbuminemia, elevated free drug concentrations may occur in these patients. The authors prepared one serum pool from patients infected with HIV but receiving no bactrim and the other pool from HIV patients receiving bactrim. They supplemented both HIV pools and normal pool (diluted with 0.9% saline to mimic albumin concentration of HIV pools) with a known concentration of phenytoin or valproic acid. After incubation at 37 degrees C for 3 hours, they measured free phenytoin and free valproic acid concentrations in the protein free ultrafiltrates using **fluorescence** polarization ***immunoassays*** . The total drug concentrations in original sera were measured by **microparticle** enzyme immunoassays. None of the patients had any significant liver or renal disease. The aliquots of HIV pools and normal pool were supplemented with the same concentration of phenytoin or valproic acid. The concentration of free phenytoin and free valproic acid were significantly elevated in patients with HIV (mean = 2.52, SD = 0.11 mu g/ml for phenytoin; mean = 41.5, SD = 1.5 mu g/ml for valproate) compared to controls (mean = 1.50, SD = 0.0 7 mu g/ml for phenytoin; mean = 19.9, SD = 0.5 mu g/ml for valproate). The concentrations of both free phenytoin and valproic acid were further elevated in patients prepared in the HIV pool who were receiving bactrim(mean = 2.81, SD = 0.09 mu g/ml for phenytoin; mean = 44.0, SD = 1.1 mu g/ml for valproate), but when normal serum pool was supplemented with 4.4 mg/dl of bactrim (concentration of bactrim in HIV pool) and supplemented with the same concentration of phenytoin or valproic acid, the observed free concentrations were much lower (mean = 1.65, SD = 0.05 mu g/ml for phenytoin; mean = 26.1, SD = 1.4 mu g/ml for valproate). This indicates that

hypoalbuminemia and bactrim concentrations do not account for the observed free drug concentrations in patients with HIV. The authors also observed elevated free phenytoin and valproic acid in sera from three individual patients with AIDS compared to normals (normal serum diluted with 0.9% saline to mimic the albumin concentration of serum collected from a patient with HIV and then both specimens supplemented with the same concentration of phenytoin or valproic acid).

CATEGORY: PHARMACOLOGY & PHARMACY; PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH; TOXICOLOGY; BIOCHEMISTRY & MOLECULAR BIOLOGY
SUPPLEMENTARY TERM: free phenytoin; free valproic acid; HIV
SUPPL. TERM PLUS: DRUGS; DISPLACEMENT; SEIZURES
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
*CDC	1989	38		MMWR
BURGER D M	1994	16	616	THER DRUG MONIT
DASGUPTA A	1991	37	98	CLIN CHEM
DASGUPTA A	1996	18	97	THER DRUG MONIT
DASGUPTA A			95	VALPROIC ACID UPDATE
HOLTZMAN D M	1989	87	173	AM J MED
HORSBURGH C R	1991	324	1332	NEW ENGL J MED
LEE B L	1992	14	773	CLIN INFECT DIS
LEONARD R F	1981	29	56	CLIN PHARMACOL THER
MOYER T P	1986		1654	TXB CLIN CHEM
PERUCCA E	1984	9	71	CLIN PHARMACOKINET
SPECTER S	1989		1	VIRUS INDUCED IMMUNO
TAKEDA A	1976	8	401	BRAIN DEV
WONG M C	1990	47	640	ARCH NEUROL-CHICAGO

L207 ANSWER 35 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 97:558864 SCISEARCH
THE GENUINE ARTICLE: XL785
TITLE: Quantitative assessment of serum hepatitis B e antigen, IgM hepatitis B core antibody and HBV DNA in monitoring the response to treatment in patients with chronic hepatitis B
AUTHOR: Bernard F; Raymond G; Willems B; Villeneuve J P (Reprint)
CORPORATE SOURCE: UNIV MONTREAL, HOP ST LUC, CTR RECH CLIN ANDRE VIALLET, DIV HEPATOL, 264 RENE LEVESQUE BLVD E, MONTREAL, PQ H2X 1P1, CANADA (Reprint); UNIV MONTREAL, HOP ST LUC, CTR RECH CLIN ANDRE VIALLET, DIV HEPATOL, MONTREAL, PQ H2X 1P1, CANADA
COUNTRY OF AUTHOR: CANADA
SOURCE: JOURNAL OF VIRAL HEPATITIS, (JUL 1997) Vol. 4, No. 4, pp. 265-272.
Publisher: BLACKWELL SCIENCE LTD, OSNEY MEAD, OXFORD, OXON, ENGLAND OX2 0EL.
ISSN: 1352-0504.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: CLIN
LANGUAGE: English
REFERENCE COUNT: 14
ABSTRACT:

Virological response to treatment of chronic hepatitis B is defined as the loss of serum hepatitis B **virus** DNA (HBV DNA) and hepatitis B e antigen (HBeAg). The quantitative measurement of HBV DNA is useful for monitoring and predicting the response to therapy with interferon-alpha (IFN-alpha). In this study, we evaluated whether quantitative measurement of serum HBeAg and IgM antibody to hepatitis B core antigen (HBcAb) could also be used in this manner. Using a **microparticle**-capture enzyme

immunoassay (IMx), a standard curve of **fluorescence** rate vs HBeAg concentration was constructed to provide quantitative results. The IgM HBcAb index was also measured using a **microparticle** enzyme immunoassay and serum HBV DNA was measured by a solution hybridization assay. We studied 48 patients who were initially positive for HBeAg and HBV DNA and who were treated with IFN-alpha 2b. Their sera were serially evaluated for HBeAg concentration, and results were compared with HBV DNA levels. In the 14 patients who responded to IFN, similar disappearance curves were observed with good intraindividual correlation between the levels of the two markers, In the 34 non-responders, HBeAg levels decreased during treatment but never became negative; HBV DNA levels also decreased during treatment and became transiently undetectable in six patients, falsely suggesting treatment success, The IgM HBcAb index paralleled changes in alanine aminotransferase (ALT) concentration and did not provide additional information. Multiple logistic regression indicated that baseline ALT and HBeAg concentrations were independent predictors of the response to treatment. and the addition of neither HBV DNA nor IgM HBcAb improved the model. We conclude that quantitative measurement of HBeAg provides information similar to that of HBV DNA in monitoring and predicting the response to treatment; this technique could be readily adaptable to clinical laboratories.

CATEGORY: GASTROENTEROLOGY & HEPATOLOGY; INFECTIOUS DISEASES
SUPPLEMENTARY TERM: HBeAg; HBV; DNA; hepatitis B
SUPPL. TERM PLUS: ALPHA-INTERFERON; **VIRUS**-INFECTION; NATURAL COURSE; THERAPY; TRIAL
RESEARCH FRONT: 95-3406 003; CHRONIC HEPATITIS-B; SEMIQUANTITATIVE ANTI-HBC IGM DETECTION IN CHILDREN; INFECTION USING RECOMBINANT ALPHA-INTERFERON

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BROOK M G	1989	10	761	HEPATOLOGY
BRUNETTO M R	1993	19	431	J HEPATOL
BUTTERWORTH L A	1996	24	686	J HEPATOL
DIENSTAG J L	1995	333	1657	NEW ENGL J MED
EBLE K	1991	33	139	J MED VIROL
HOOFNAGLE J H	1988	95	1318	GASTROENTEROLOGY
KRUGER M	1996	2	253	LIVER TRANSPL SURG
KUHNS M C	1989	27	274	J MED VIROL
MARINOS G	1994	19	303	HEPATOLOGY
PERILLO R	1993	18	1306	HEPATOLOGY
PERILLO R P	1988	109	95	ANN INTERN MED
PERILLO R P	1990	323	295	NEW ENGL J MED
VILLENEUVE J P	1996	10	21	CAN J GASTROENTEROL
WONG D K H	1993	119	312	ANN INTERN MED

L207 ANSWER 36 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 96:919952 SCISEARCH
THE GENUINE ARTICLE: VX382
TITLE: COBAS AMPLICOR(TM): Fully automated RNA and DNA amplification and detection system for routine diagnostic PCR
AUTHOR: DiDomenico N; Link H; Knobel R; Caratsch T; Weschler W; Loewy Z G; Rosenstraus M (Reprint)
CORPORATE SOURCE: ROCHE MOL SYST, 1080 ROUTE 202, BRANCHBURG, NJ 08876 (Reprint); ROCHE MOL SYST, BRANCHBURG, NJ 08876; TEGIMENTA AG, ROTKREUZ, SWITZERLAND
COUNTRY OF AUTHOR: USA; SWITZERLAND
SOURCE: CLINICAL CHEMISTRY, (DEC 1996) Vol. 42, No. 12, pp. 1915-1923.
Publisher: AMER ASSOC CLINICAL CHEMISTRY, 2101 L STREET NW, SUITE 202, WASHINGTON, DC 20037-1526.

ISSN: 0009-9147.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 39
ABSTRACT:

The COBAS AMPLICOR(TM) system automates amplification and detection of target nucleic acids, making diagnostic PCR routine for a variety of infectious diseases, The system contains a single thermal cycler with two independently regulated heating/cooling blocks, an incubator, a magnetic particle washer, a pipettor, and a photometer. Amplified products are captured on oligonucleotide-coated paramagnetic **microparticles** and detected with use of an avidin-horseradish peroxidase (HRP) conjugate, Concentrated solutions of amplicon or HRP were pipetted without detectable carryover, Amplified DNA was detected with an intraassay CV of <4.5%; the combined intraassay CV for amplification and detection was <15%, No cross-reactivity was observed when three different target nucleic acids were amplified in a single reaction and detected with three target-specific capture probes, The initial COBAS AMPLICOR menu includes qualitative tests for diagnosing infections with Chlamydia trachomatis, Neisseria gonorrhoeae, Mycobacterium tuberculosis, and hepatitis C ***virus*** . All tests include an optional Internal Control to provide assurance that specimens are successfully amplified and detected.

CATEGORY: CHEMISTRY, CLINICAL & MEDICINAL
SUPPLEMENTARY TERM: polymerase chain reaction; infections; **bacteria**; Chlamydia trachomatis; Neisseria gonorrhoeae; Mycobacterium tuberculosis; hepatitis C **virus**; DNA probes; paramagnetic particles; biotin-avidin interaction
SUPPL. TERM PLUS: POLYMERASE CHAIN-REACTION; DIRECT **FLUORESCENT-ANTIBODY**; ENZYMATIC AMPLIFICATION; OLIGONUCLEOTIDE PROBES; AMPLIFIED DNA; QUANTITATION; CONTAMINATION; SEQUENCES; DISEASE; PRODUCT
RESEARCH FRONT: 94-1559 001; HIV-1 INFECTION; PLASMA VIRAL LOAD; IN-SITU POLYMERASE CHAIN-REACTION
94-1830 001; DETECTION OF CHLAMYDIA-TRACHOMATIS; TESTING FIRST-VOID URINE IN A LIGASE CHAIN-REACTION ASSAY; RAPID DIAGNOSIS; ASYMPTOMATIC MALES; URETHRAL SPECIMENS
94-2139 001; POLYMERASE CHAIN-REACTION; C-MYC MESSENGER-RNA EXPRESSION; COMPETITIVE PCR

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
ABRAMSON R D	1995		39	PCR STRATEGIES
ALFORD R L	1994	10	628	INT J TECHNOL ASSESS
BARANY F	1991	1	5	PCR METH APPL
BARNEA E	1990	5	881	NEURON
BEGOVICH A B	1995	273	586	JAMA-J AM MED ASSOC
BEVAN I S	1992	1	222	PCR METH APPL
BONBEROLDINGEN C H	1989		209	PCR TECHNOLGOY PRINC
BOSHOFF C	1995	1	1274	NAT MED
BRUCE I J	1993	77	183	SCI PROG
BUGAWAN T L	1994	44	137	TISSUE ANTIGENS
BULDOWLE B	1995	40	45	J FORENSIC SCI
CIMINO G D	1991	19	99	NUCLEIC ACIDS RES
DAHLEN P	1991	5	143	MOL CELL PROBE
DALE B	1994	25	637	LAB MED
HAFF L	1991	10	102	BIOTECHNIQUES
HELMUTH R	1990		119	PCR PROTOCOLS GUIDE
HIGUCHI R	1992	10	413	BIO-TECHNOL
HIGUCHI R	1993	11	1026	BIO-TECHNOL
HOLLAND P M	1991	88	7276	P NATL ACAD SCI USA

KELLOGG D E	1990	189	202	ANAL BIOCHEM
KEYS D	1995	41	1680	CLIN CHEM
LIVAK K J	1995	4	357	PCR METH APPL
LOEFFELHOLZ M J	1992	30	2847	J CLIN MICROBIOL
LOEWY Z G	1993		355	ADV GENOME BIOL
LONGO M C	1990	93	125	GENE
LUEHRSEN K R	1995	2	348	CELL VISION
MIYADA C G	1991	5	327	MOL CELL PROBE
MUGGLETONHARRIS A L	1993	5	600	CURR OPIN OBSTET GYN
MULDER J	1994	32	292	J CLIN MICROBIOL
NUOVO G J	1991	139	1239	AM J PATHOL
PALMER C J	1993	59	3618	APPL ENVIRON MICROB
PALMER C J	1995	61	407	APPL ENVIRON MICROB
SAIKI R K	1989	86	6230	P NATL ACAD SCI USA
SAIKI R K	1985	230	1350	SCIENCE
SAIKI R K	1988	239	487	SCIENCE
SAKAR G	1990	8	404	BIOTECHNIQUES
STOKER A W	1990	18	4290	NUCLEIC ACIDS RES
WANG A M	1989	86	9717	P NATL ACAD SCI USA
WILLIAMS R O	1995		28	IVD TECH NOV

L207 ANSWER 37 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 96:526404 SCISEARCH
THE GENUINE ARTICLE: UW224
TITLE: THE YEAR OF PASTEUR - FROM THE CONCEPT OF ANTIBODY AND ANTIGEN BY BORDET (1895) TO THE ELISA - WHAT FUTURE FOR IMMUNOLOGICAL DIAGNOSIS
AUTHOR: PILLOT J (Reprint)
CORPORATE SOURCE: INST PASTEUR, UNITE IMMUNOL MICROBIENNE, 28 RUE DR ROUX, F-75724 PARIS 15, FRANCE (Reprint)
COUNTRY OF AUTHOR: FRANCE
SOURCE: CLINICAL AND DIAGNOSTIC VIROLOGY, (MAY 1996) Vol. 5, No. 2-3, pp. 191-196.
ISSN: 0928-0197.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: 16
ABSTRACT:

Background: Chronological account of the increase of the sensitivity of immunological reactions and future possible improvements an presented.

Results: During these 100 years, the sensitivity of immunological reactions has been increased by approximately 5 log by reference to the basic technique of quantitative immunoprecipitation.

Objectives: Future progresses can be foreseen (i) in the signal of labeled reagents, with the development of time-resolved **fluoro-** ***immunoassays*** ; (ii) in the presentation of viral antigens on solid phase, with a larger use of polystyrene **microbeads**; (iii) in the antigen used for antibody detection, by promoting the characterization of antibodies to conformational structures of **viruses**; (iv) for antibody reagent preparations, particularly by immunomodulation for the development of antibodies to weak epitopes or to presently non-immunogenic structures and; (v) in the discrimination of detected antibodies. Characterization of the discontinuous or continuous nature of the recognized epitopes and of the affinity of antibodies could permit to date the infection. Inhibition of a monoclonal antibody reacting with a conformational epitope, and identification of an idiotope, will be more selective than the usual characterization of a large polyclonal antibody activity. Finally, the use of antibodies specific of the sole SIgA, molecule is expected to carry new informations in serological diagnosis at the entry of numerous infectious agents. ELISA techniques will become tightly complementary to PCR, which leads to

CATEGORY: VIROLOGY

SUPPLEMENTARY TERM: IMMUNOLOGICAL DIAGNOSIS; SEROLOGY; TESTS; ELISA; **VIRUSES**
SUPPL. TERM PLUS: **VIRUS**
RESEARCH FRONT: 94-3362 001; TIME-RESOLVED FLUORESCENCE; COMPLEXES OF LANTHANIDE IONS; MACROCYCLIC EUROPIUM LIGAND; LUMINESCENT LABELS
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BELEC L	1995	11	719	AIDS RES HUM RETROV
BELEC L	1995	45	113	J MED VIROL
BOUIGE P	1996			UNPUB IMPROVED HUMOR
GAILLARD O	1994	52	751	ANN BIOL CLIN
HAQ T A	1995	268	714	SCIENCE
NATH A	1989	107	159	ARCH VIROL
PETIT M A	1986	23	511	MOL IMMUNOL
PILLOT J	1995	23	103	J HEPATOL
SALMI A A	1991	3	503	CURR OPIN IMMUNOL
SOINI E	1979	25	353	CLIN CHEM
STANLEY C J	1985	83	89	J IMMUNOL METHODS
THOMAS H I J	1991	1	41	J MED VIROL
URNOVITZ H B	1993	342	1458	LANCET
VANREGENMORTEL M H V	1990	2	1	IMMUNOCHEMISTRY VIRU
WILLETT B J	1994	176	213	J IMMUNOL METHODS
ZHOU E M	1995	33	850	J CLIN MICROBIOL

L207 ANSWER 38 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 95:504916 SCISEARCH
THE GENUINE ARTICLE: RK662
TITLE: PROTECTION AGAINST MYCOPLASMA-PULMONIS INFECTION BY GENETIC VACCINATION
AUTHOR: LAI W C (Reprint); BENNETT M; JOHNSTON S A; BARRY M A; PAKES S P
CORPORATE SOURCE: UNIV TEXAS, SW MED CTR, DEPT PATHOL, DIV COMPARAT MED, 5323 HARRY HINES BLVD, DALLAS, TX, 75235 (Reprint); UNIV TEXAS, SW MED CTR, DEPT PATHOL, DALLAS, TX, 75235; UNIV TEXAS, SW MED CTR, DEPT INTERNAL MED, DIV MOLEC MED, DALLAS, TX, 75235
COUNTRY OF AUTHOR: USA
SOURCE: DNA AND CELL BIOLOGY, (JUL 1995) Vol. 14, No. 7, pp. 643-651.
ISSN: 1044-5498.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 52
ABSTRACT:

The induction of an immune response against a foreign protein usually requires purification of that protein, which is injected into animals. The isolation of a pure protein is time consuming and costly. Recently, a technique called biolistic transformation (biological ballistic system) ***microparticle*** injection, gene gun, or particle bombardment was developed. The basic idea is that the DNA or biological material coated onto heavy tungsten or gold particles is shot into target cells or animals. We have vaccinated mice by introducing the gene (Mycoplasma pulmonis DNA or a specific fragment) encoding a protein recognized by a protective monoclonal antibody directly into the skin or muscle of mice by two methods: (i) using a hand-held form of the biolistic system that can propel DNA-coated gold microprojectiles (2 mu g of DNA) directly into the skin; (ii) using a conventional intramuscular injection of the DNA (100 mu g) into quadricep muscles of transfected mice. HeLa cells were transfected in vitro by the gene gun or by the liposomal delivery system. Indirect immuno-**fluorescent antibody** (IFA)

assay of culture cells indicated that both methods could be successful. Production of antibody and cell-mediated immunity against M. pulmonis were monitored by assaying serum IFA and enzyme-linked immunosorbent assay (ELISA), and delayed type hypersensitivity. In addition, macrophage migration inhibition and lymphocyte transformation to antigen in spleen cells were also tested. Both delivery systems induced humoral and cellular immunity, and vaccinated the mice against infection. Genetic immunization by using the gene gun saves time, money, and labor; moreover, this general method is also applicable to gene therapy.

CATEGORY: CELL BIOLOGY; BIOCHEMISTRY & MOLECULAR BIOLOGY; GENETICS & HEREDITY

SUPPL. TERM PLUS: IMMUNODEFICIENCY-**VIRUS** TYPE-1; PLASMID DNA; IMMUNE-RESPONSES; MUSCLE INVIVO; MOUSE MUSCLE; MICE; IMMUNIZATION; EXPRESSION; INJECTION; INFLUENZA

RESEARCH FRONT: 93-0189 002; DUCHENNE MUSCULAR-DYSTROPHY; MDX MOUSE MUSCLE INVIVO; MILD DEFICIENCY
93-1469 001; MHC CLASS-I MOLECULES; PEPTIDE PRESENTATION; CYTOTOXIC T-LYMPHOCYTES; ANTIGEN PROCESSING

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BABIUK L A	1989		141	VIRUS INDUCED IMMUNO
BOSHART M	1985	41	521	CELL
CASSELL G	1975	18	342	J RETICULOENDOTHEL S
CASSELL G H	1993	225	395	ANN Y ACAD SCI
CASSELL G H	1974	112	124	J IMMUNOL
CASSELL G H	1982	4	518	REV INFECT DIS
COONEY E L	1991	337	567	LANCET
DAVIDSON M K	1982	4	S 243	REV INFECT DIS S
DAVIS H L	1993	4	733	HUM GENE THER
DENNY F W	1972	5	327	J MED MICROBIOL
DORFMAN D M	1989	7	568	BIOTECHNIQUES
FYNAN E F	1993	90	11478	P NATL ACAD SCI USA
GOTTSTEIN B	1984	33	1185	AM J TROP MED HYG
GRAY D	1991	174	969	J EXP MED
HOROWITZ S A	1978	22	161	INFECT IMMUN
JOHNSTON S A	1993	15	225	GENET ENG
KITSIS R N	1991	88	4138	P NATL ACAD SCI USA
KOZAK M	1986	44	283	CELL
LAI W C	1991	59	346	INFECT IMMUN
LAI W C	1987	37	298	LAB ANIM SCI
LAI W C	1989	39	11	LAB ANIM SCI
LAI W C	1991	9	177	VACCINE
LAI W C	1994	12	1485	VACCINE
LAI W C	1994	12	291	VACCINE
LEVINE M M	1990		269	NEW GENERATION VACCI
LIN H	1990	82	2217	CIRCULATION
LINDSEY J R	1971	62	675	AM J PATHOL
LINDSEY J R	1973	72	63	AM J PATHOL
MASIGA W N	1968	96	1867	J BACTERIOL
MCKEE K T	1987	36	435	AM J TROP MED HYG
MONACO J J	1992	13	173	IMMUNOL TODAY
OGRA P L	1991	164	191	J INFECT DIS
REDFIELD R R	1987	316	673	NEW ENGL J MED
ROBINSON H L	1993	11	957	VACCINE
SEDEGAH M	1994	91	9866	P NATL ACAD SCI USA
STRAUSE W M	1990			CURRENT PROTOCOLS MO
TANG D C	1992	356	152	NATURE
TAYLOR G	1976	30	611	IMMUNOLOGY
TAYLOR G	1980	29	1160	INFECT IMMUN
TAYLOR G	1974	33	331	MEDICALE

TAYLOR P M	1986	58	417	IMMUNOLOGY
TEW J G	1978	114	407	ADV EXP MED BIOL
TEW J G	1979	37	69	IMMUNOLOGY
TREVINO L B	1986	53	129	INFECT IMMUN
ULMER J B	1993	259	1745	SCIENCE
WAKAI M	1983	56	913	YALE J BIOL MED
WANG B	1993	12	799	DNA CELL BIOL
WANG B	1993	90	4156	P NATL ACAD SCI USA
WOLFF J A	1991	11	474	BIOTECHNIQUES
WOLFF J A	1992	1	363	HUM MOL GENET
WOLFF J A	1990	247	1465	SCIENCE
YANKAUCKAS M A	1993	12	771	DNA CELL BIOL

L207 ANSWER 39 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 95:304485 SCISEARCH
THE GENUINE ARTICLE: QV464
TITLE: QUANTITATIVE CYTOFLUOROMETRIC DETERMINATION OF CELL MEMBRANE-ASSOCIATED LARGE TUMOR-ANTIGEN ON SV40-TRANSFORMED CELLS
AUTHOR: HESS R D (Reprint); KUTHER M; HAESSLER C; PAETZOLD S; BRAUN D G; BRANDNER G
CORPORATE SOURCE: UNIV FREIBURG, INST MED MIKROBIOL & HYG, VIROL ABT, POSTFACH 820, D-79008 FREIBURG, GERMANY (Reprint); CIBA GEIGY LTD, DIV PHARMACEUT, BASEL, SWITZERLAND
COUNTRY OF AUTHOR: GERMANY; SWITZERLAND
SOURCE: CYTOMETRY, (01 MAY 1995) Vol. 20, No. 1, pp. 81-85. ISSN: 0196-4763.
DOCUMENT TYPE: Note; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 26
ABSTRACT:

The aim of this study was to quantitate the number of cell membrane-located SV40 large tumor antigen (large T) molecules of SV40-transformed cell lines by cytofluorimetric analysis. Five different SV40-transformed cell lines were labelled by either a biotin- or a **fluorescein**-conjugated monoclonal ***antibody*** , PAb1605, which is specific for the large T carboxy-terminus. The conjugated-**antibody fluorescence** signals of the stained large T molecules of transformed cells were measured via cytofluorimetry. Comparison of the fluorescence signals of calibrated beads bearing a known number of fluorescein molecules to the signals of conjugated PAb1605 antibodies bound on **microbeads** to a defined number of IgG binding sites made it possible to determine the number of antibody-accessible large T molecules per SV40-transformed cell. The numbers (x10(-4)) found per cell were 1.0 (ELONA, hamster), 3.0 (VLM, mouse), 3.5 (mKSA, mouse), 11(C57SV, mouse), and 5.5 (SV80, human), respectively. Thus, the technique described allows a precise quantitation of surface-exposed, antibody-accessible viral antigen expression. (C) 1995 Wiley-Liss, Inc.

CATEGORY: CELL BIOLOGY; BIOMETHODS
SUPPLEMENTARY TERM: FLOW CYTOMETRY; MESF; CALIBRATING BEADS; PAB1605; SV40; LARGE T ANTIGEN
SUPPL. TERM PLUS: SIMIAN **VIRUS**-40; T-ANTIGEN; MONOCLONAL-ANTIBODIES; DNA CONTENT; INFECTION; MOUSE
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
BALL R K	1984	3	1485	EMBO J
BRANDNER G	1977	5	250	J CLIN MICROBIOL
CHANDRASEKARAN K	1981	27	397	INT J CANCER
DEPPERT W	1980	35	505	J VIROL
DEPPERT W	1982	122	5682	VIROLOGY

FRIEDRICH T D	1992	66	4576	J VIROL
GOODING L R	1984	1	263	CANCER CELLS
GOODING L R	1977	115	920	J IMMUNOL
GOODING L R	1980	124	1612	J IMMUNOL
HENNING R	1981	108	325	VIROLOGY
HESS R	1994	7	146	PEPTIDE RES
HORAN M	1975	91	247	EXP CELL RES
JAY G	1978	75	3055	P NATL ACAD SCI USA
KIT S	1969	4	384	INT J CANCER
KNOWLES B B	1979	122	1798	J IMMUNOL
LAFFIN J	1989	10	205	CYTOMETRY
LANGEMUTSCHLER J	1981	52	301	J GEN VIROL
LANGEMUTSCHLER J	1982	117	173	VIROLOGY
LEHMAN J M	1988	9	52	CYTOMETRY
OSHANNESSY D J	1984	8	273	IMMUNOL LETT
RINKE Y	1989	170	424	VIROLOGY
ROSE T M	1983	31	639	INT J CANCER
SANTOS M	1985	5	1051	MOL CELL BIOL
SCHOEFFEL A	1988	166	245	VIROLOGY
TRINCHIERI G	1976	261	312	NATURE
ZARLING J M	1973	50	279	J NATL CANCER I

L207 ANSWER 40 OF 51 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 88:535866 SCISEARCH
THE GENUINE ARTICLE: Q1600
TITLE: SIMULTANEOUS DETECTION OF ANTIBODIES TO CYTOMEGALO-**VIRUS** AND HERPES-SIMPLEX **VIRUS** BY USING FLOW-CYTOMETRY AND A **MICROSPHERE**-BASED **FLUORESCENCE IMMUNOASSAY**
AUTHOR: MCHUGH T M; MINER R C; LOGAN L H; STITES D P (Reprint)
CORPORATE SOURCE: UNIV CALIF SAN FRANCISCO, DEPT LAB MED, SAN FRANCISCO, CA, 94143; STANFORD UNIV HOSP, DIAGNOST VIROL LAB, STANFORD, CA, 94305; MT ZION HOSP, HAROLD BRUNN INST, SAN FRANCISCO, CA, 94120
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF CLINICAL MICROBIOLOGY, (1988) Vol. 26, No. 10, pp. 1957-1961.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: 18
CATEGORY: MICROBIOLOGY
REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)
ADLER S P	1984	24	333	TRANSFUSION
ASHLEY R	1987	61	264	J VIROL
BALACHANDRAN N	1987	61	1125	J VIROL
BERRY N J	1987	21	147	J MED VIROLOGY
FRASER C E O	1974	130	63	J INFECT DIS
GILLJAM G	1985	10	203	J VIROL METHODS
HORAN P K	1977	198	149	SCIENCE
JACOBSEN N	1987	1	456	LANCET
KAHLON J	1987	155	38	J INFECT DIS
KOHL S	1987	155	1179	J INFECT DIS
KRONICK M N	1986	92	1	J IMMUNOL METHODS
KROWKA J	1988	72	179	CLIN EXP IMMUNOL
MCHUGH T M	1985	22	1014	J CLIN MICROBIOL
MCHUGH T M	1986	95	57	J IMMUNOL METHODS
MCHUGH T M	1987	53	231	VOX SANG
MIROLO G	1987	6	207	EUR J CLIN MICROBIOL
SAUNDERS G C	1985	31	2020	CLIN CHEM

WILSON M R |1988 |107 |225 |J IMMUNOL METHODS

L207 ANSWER 41 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-292068 [33] WPIDS
DOC. NO. CPI: C2002-085814
TITLE: Array comprising adapter sequences useful for immobilizing or detecting a target nucleic acid sequence, has different addresses comprising different specific capture probes.
DERWENT CLASS: B04 D16
INVENTOR(S): GUNDERSON, K
PATENT ASSIGNEE(S): (ILLU-N) ILLUMINA INC
COUNTRY COUNT: 96
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002016649	A2	20020228	(200233)*	EN	260

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002016649	A2	WO 2001-US26519	20010827

PRIORITY APPLN. INFO: US 2000-228854P 20000829; US 2000-227948P 20000825

AB WO 200216649 A UPAB: 20020524
NOVELTY - An oligonucleotide array (I) comprising at least 25 different addresses (adapter sequences) with each comprising a different capture probe selected from 8708 24 nucleotide sequences (S1), all given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a kit comprising at least 25 nucleic acids selected from a groups of sequences complementary to (S1) or their complement; and

(2) detecting (M1) detecting a target nucleic acid (TNA), comprising:

(a) hybridizing a first adapter probe (AP1) with a first TNA (TNA1) having a domain (D1) that is complementary to TNA1 and another domain (D2) having a first sequence complementary to (S1) to form a first hybridization complex (HC1);

(b) contacting HC1 with an enzyme so that when D1 of the adapter probe is perfectly complementary with TNA1, AP1 is altered resulting in a modified AP1;

(c) contacting the modified AP1 with a population of **microspheres** comprising at least a first subpopulation comprising a first capture probe, so that the first capture probe and the modified AP1 form a second hybridization complex (HC2); and

(d) detecting the presence of the modified AP1 as an indication of the presence of TNA.

USE - (I) is useful for immobilizing a target nucleic acid (TNA) sequence by attaching a adapter nucleic acid (ANA1) (comprising a sequence complementary to a sequence from (S1)) to a target nucleic acid (TNA1) to

form a modified target nucleic acid (MTNA), and contacting MTNA with (I). The steps of above method is useful for detecting a TNA, which further comprises detecting the presence of the MTNA. M1 is useful for detecting a target nucleic acid. (All claimed).
Dwg.0/5

L207 ANSWER 42 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-114152 [15] WPIDS
DOC. NO. NON-CPI: N2002-085150
DOC. NO. CPI: C2002-034959
TITLE: Analysis of polynucleotides in a sample using generic capture sequences comprises amplifying target polynucleotide, and utilizing the product to indirectly assay the sample for the polynucleotide.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): LAI, J H; PHILLIPS, V E; WATSON, A R
PATENT ASSIGNEE(S): (QUAN-N) QUANTUM DOT CORP
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001083823	A1	20011108	(200215)*	EN	85

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001057454 A 20011112 (200222)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001083823	A1	WO 2001-US13979	20010430
AU 2001057454	A	AU 2001-57454	20010430

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001057454	A	Based on	WO 200183823

PRIORITY APPLN. INFO: US 2000-200635P 20000428
AB WO 200183823 A UPAB: 20020306
NOVELTY - Assaying, (M1) for an amplification product (AMP) from a first target polynucleotide, (TP), comprising providing a sample that is suspected of containing AMP, where the AMP is a polynucleotide comprising a first label and a capture sequence not present in the TP at the same position, is new.

DETAILED DESCRIPTION - A target polynucleotide, (TP), is amplified, where first primer has a tag sequence, the complement of which is formed on the opposite strand during amplification and is referred to as capture sequence (CS), and the opposite strand is referred to as an amplification product (AMP) has a label; probe conjugated to substrate specific to CS, is contacted with AMP to form AMP detection complex. Assaying (M1) for an AMP from a first TP, comprises providing a sample that is suspected of containing AMP, where the AMP is a polynucleotide comprising a first label and a capture sequence not present in the TP at the same position, where the AMP is formed by primer extension from a template, where the template comprises a complement to the TP and a target noncomplementary region, where the capture sequence is a complement to the target noncomplementary

region, providing a substrate that is conjugated to a first capture probe, contacting the sample with the capture probe under a first set of hybridization conditions, where the capture probe can bind to the capture sequence under the first set of hybridization conditions and determining if the first label is associated with the substrate.

INDEPENDENT CLAIMS are also included for the following:

(1) forming (M2) an AMP detection complex for assaying a sample for a first TP;

(2) an amplification product detection complex comprising a capture probe polynucleotide hybridized to capture sequence of labeled amplification product from a TP, where the capture probe polynucleotide is conjugated to a **substrate**, where the **capture** sequence is not present in a region of the TP which is amplified and is introduced into the amplification product by copying a template polynucleotide, the template polynucleotide comprising a target noncomplementary region and a region complementary to the TP, where the target noncomplementary region was introduced into the template polynucleotide by extension of a primer hybridized to the target polynucleotide, the primer comprising the target noncomplementary region and where the capture sequence is complementary to the target noncomplementary region; and

(3) a kit for assaying for an AMP from a TP comprises a **substrate** attached to a **capture** probe, a first primer comprising a 3' end a first target complementary region located at the 3' end of the first primer, and a first target noncomplementary region that is not complementary to the first TP at a position 3' of a sequence to which the first target complementary region can hybridize, a second primer, label, housing for retaining the substrate, first primer, second primer, and a label and instruction provided with the housing that describe how to use the components of the kit to assay a sample by forming an AMP from the TP using the first and second primers that comprises the label and a capture sequence that is complementary to the target noncomplementary in the first primer, where the capture sequence can bind to the capture probe.

USE - (M2) is useful for forming an AMP detection complex for assaying a sample for first TP. The method further comprises determining if the first label is associated with the first substrate, where AMP is produced at a detectably higher level from at least one allele of a locus having at least two alleles and the first substrate preferably a first **microsphere** comprising a first spectral code is identified by decoding the spectral code which is preferably performed prior to, simultaneously or subsequent to determining if the first label from the second primer is associated with a substrate, first TP, preferably single-stranded or double-stranded DNA or RNA and a polymerase, preferably DNA polymerase having reverse transcriptase activity is used to form the first primer extension product (claimed). (M1) is useful for particular polynucleotide sequences, whether based on SNPs, conserved sequences, or other features or useful in a wide variety of different applications. The method is useful for pharmacogenetic testing, such methods ca be used in a forensic setting to identify the species or individual which was the source of a forensic specimen. Polynucleotide analysis methods can also be used in an anthropological setting. Paternity testing is another area, as is testing for compatibility, between prospective tissue or blood donors and patients in need, and in screening for heredity disorders. (M1) is also useful for studying gene expression in response to a stimulus. Other applications include human population genetics, analyses of human evolutionary history, and characterization of human haplotype diversity. The method is useful to detect immunoglobulin class switching and hypervariable mutation of immunoglobulins, to detect polynucleotide sequences from contaminants or pathogens including bacteria, yeast, viruses, for HIV subtyping to determine the particular strains or relative amounts of particular strains infecting an individual, and can be repeatedly to monitor changes in the individuals predominant HIV strains, such as the development of drug resistance or T cell tropism; and to

detect single nucleotide polymorphisms, which may be associated with particular alleles or subsets of allele. Over 1.4 million different single nucleotide polymorphisms (SNPs) in the human population have been identified. The method is also useful for mini-sequencing and for detection of mutations. Any type of mutation can be detected, including without limitation SNPs, insertions, deletions, transitions, transversions, inversions, frame shifts, triplet repeat expansions, and chromosome rearrangements. The method is useful to detect nucleotide sequences associated with increased risk of diseases or disorders, including cystic fibrosis, Tay-Sachs, sickle-cell anemia, etc. The method is useful for any assay in which a sample can be interrogated regarding an amplification product from a target polynucleotide. Typical assays involve determine the presence of the amplification product in the sample or its relative amount, or the assays may quantitative or semi-quantitative. Results from such assays can be used to determine the presence or amount of the target polynucleotide present in the sample. The above methods are particularly useful in multiplex settings where several TP are to be assayed.
Dwg.0/15

L207 ANSWER 43 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-011414 [01] WPIDS
DOC. NO. CPI: C2002-002973
TITLE: Analyzing the presence and/or absence of specific nucleic acids using solid supports and capture probes complementary to target nucleic acids.
DERWENT CLASS: B04 D16
INVENTOR(S): SHI, L; WANG, X; YANG, L; ZHU, T
PATENT ASSIGNEE(S): (SYGN) SYNGENTA PARTICIPATIONS AG
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001083814	A2	20011108	(200201)*	EN	42

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001070504 A 20011112 (200222)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001083814	A2	WO 2001-EP5006	20010503
AU 2001070504	A	AU 2001-70504	20010503

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001070504	A	Based on	WO 200183814

PRIORITY APPLN. INFO: US 2000-565214 20000504
AB WO 200183814 A UPAB: 20020105
NOVELTY - Methods for analyzing the presence and/or absence of a specific nucleic acid using a solid support and a capture probe complementary to region of target nucleic acid and polymerizing a labeled extension complementary to the target nucleic acid, are new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the

following:

(1) a method (I) for analysis of a nucleic acid sample, comprising:

(a) providing a substrate comprising a solid support and a capture probe linked to it (the capture probe has a sequence complementary to a first segment of a sequence of a single-stranded target nucleic acid);

(b) contacting the substrate with a nucleic acid sample, under conditions suitable for hybridization between the capture probe and the target nucleic acid (upon the hybridization at least a second segment of the sequence of the target nucleic acid remains single stranded);

(c) exposing the substrate to conditions suitable for complementing at least a second segment of the target nucleic acid (the complementing nucleic acid comprises nucleotides having a label capable of enhancing sensitivity of detection of the complementing nucleic acid); and

(d) analyzing the label to determine presence or absence of the target nucleic acid in the nucleic acid sample;

(2) a method (II) of screening for changes in the expression or regulation of a target nucleic acid in a biological system, comprising:

(a) treating the biological system with a substance, or subjecting the biological system to changed environmental conditions;

(b) extracting a nucleic acid sample from the biological system;

(c) providing a substrate comprising a solid support and a capture probe linked to it (the capture probe has a sequence complementary to a first segment of a sequence of a single-stranded target nucleic acid);

(d) contacting the substrate with the nucleic acid sample extracted from the biological system, under conditions suitable for hybridization between the capture probe and the target nucleic acid (upon the hybridization a second segment of the sequence of the target nucleic acid remains single stranded);

(e) exposing the substrate to conditions suitable for complementing at least a second segment of the target nucleic acid (the complementing nucleic acid comprises nucleotides having a label capable of enhancing sensitivity of detection of the complementing nucleic acid and the complementation is preferably achieved by polymerizing an extension complementary to the second segment of the target nucleic acid) (the extension comprises nucleotides having a label capable of enhancing sensitivity of detection of the extension);

(f) analyzing the label to determine presence or absence of the target nucleic acid in the nucleic acid sample; and

(g) determining changes in the expression or regulation of the target nucleic acid in the biological system;

(3) a system (III) of gene expression analysis, comprising a **microbead** having at least two different fluorochromes and at least one capture probe linked to the **microbead** (the capture probe has a sequence complementary to a first segment of a sequence of a target nucleic acid and the system also comprises a labeled probe complementary to at least a second segment of the sequence of the target nucleic acid (the labeled probe comprises a label capable of enhancing sensitivity of detection of it));

(4) a diagnostic kit (IV) suitable for diagnosis of a particular physiological state of an organism, comprising a solid support and a capture probe linked to the solid support (the capture probe is complementary to a first segment of a target nucleic acid associated with the physiological state);

(5) a method (V) for marker assisted breeding comprising:

(a) providing a substrate comprising a solid support and a capture probe linked to it (the capture probe has a sequence complementary to a first segment of a sequence of a target nucleic acid and the target nucleic acid is correlated with a trait of interest in a breeding program);

(b) contacting the substrate with a nucleic acid sample from an individual or population in the breeding program, under conditions suitable for hybridization between the capture probe and the target nucleic acid;

(c) probing a second segment of the target nucleic acid to detect presence or absence of the target nucleic acid; and (d) determining desirability of the individual or population for the breeding program, based on the presence or absence of the target nucleic acid (so that the individual is used for marker assisted breeding);

(6) a method (VI) of determining effectiveness of a capture probe, comprising:

(a) providing a substrate comprising a solid support and a capture probe linked to it (the capture probe has a sequence complementary to a first segment of a sequence of a single-stranded target nucleic acid);

(b) contacting the substrate with a nucleic acid sample, under conditions suitable for hybridization between the capture probe and the target nucleic acid (upon the hybridization at least a second segment of the sequence of the target nucleic acid remains single stranded);

(c) exposing the substrate to conditions suitable for polymerizing an extension complementary to the second segment of the target nucleic acid (the extension comprises nucleotides having a label capable of enhancing sensitivity of detection of the extension); and

(d) analyzing the label quantitatively to determine effectiveness of the capture probe in capturing the target nucleic acid; and

(7) a method (VII) of analysis of a nucleic acid sample, comprising:

(a) providing a substrate comprising a solid support and a capture probe linked to it;

(b) providing a single-stranded target nucleic acid sample, comprising at least a first segment, a second segment, and a third segment (the capture probe has a sequence complementary to a portion of one of the segments);

(c) contacting the substrate with the nucleic acid sample, under conditions suitable for hybridization between the capture probe and the target nucleic acid (upon the hybridization at least two of the segments of the nucleic acid sample remain single stranded);

(d) contacting the substrate with at least one labeled probe, under conditions suitable for hybridization between the labeled probe and a portion of a single stranded segment of the nucleic acid sample (the labeled probe comprises a nucleic acid sequence complementary to at least a portion of the single stranded segment of the nucleic acid sample; and

(e) analyzing the label to determine presence or absence of the target nucleic acid in the nucleic acid sample.

USE - The methods are used analyze all types of nucleic acids and can be used to study multiple genes in a single assay using different capture probes conjugated to different class of microspheres that can be mixed in any desired combination.

ADVANTAGE - The methods are inexpensive, fast, flexible, and applicable to high-throughput technology.

Dwg.0/0

L207 ANSWER 44 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-418116 [44] WPIDS
DOC. NO. NON-CPI: N2001-309754
DOC. NO. CPI: C2001-126463
TITLE: Decoding array sensors with **microspheres** by providing array composition comprising two subpopulations of **microspheres**, each comprising a bioactive agent and two decoding attributes and detecting decoding attributes.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): CHEE, M S; CZARNIK, A W; STUELPNAGEL, J R
PATENT ASSIGNEE(S): (ILLU-N) ILLUMINA INC
COUNTRY COUNT: 87
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 2001046675 A2 20010628 (200144)* EN 77
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 2001034366 A 20010703 (200164)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046675 A2		WO 2000-US35245	20001222
AU 2001034366 A		AU 2001-34366	20001222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001034366 A	Based on	WO 200146675

PRIORITY APPLN. INFO: US 2000-235531P 20000926; US 1999-172106P 19991223

AB WO 200146675 A UPAB: 20010809
NOVELTY - Decoding (M) array sensors with **microspheres** involves, providing an array composition comprising a population of **microspheres** which comprise a first and a second subpopulation, where each subpopulation comprises a bioactive agent and a first and a second decoding attribute, and detecting each of the first and second decoding attributes to identify each of the bioactive agents.
USE - (M) is useful for decoding **microsphere** array sensors (claimed). (M) is useful for detecting mutations or mismatches in target nucleic acid sequences, for analyzing the results of genomics based assays such as gene expression profiling, genotyping and single nucleotide polymorphism (SNP) analysis, and in array quality control and calibration.
ADVANTAGE - (M) is capable of independent error checking, when compared to conventional methods. Extremely high density arrays can be made through the use of fiber optic technology.
Dwg.0/11

L207 ANSWER 45 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-662474 [76] WPIDS
CROSS REFERENCE: 2000-531469 [42]; 2001-289828 [29]
DOC. NO. CPI: C2001-194613
TITLE: Separating a polynucleotide from a sample, comprises immobilizing probes with specific sequences to independent areas on a substrate surface, hybridizing polynucleotides to the probe, and heating and cooling areas on the substrate.
DERWENT CLASS: B04 D16
INVENTOR(S): KATO, H; OKANO, K; YASUDA, K
PATENT ASSIGNEE(S): (HITA) HITACHI LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2001029017 A1		20011011 (200176)*			40

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

US 2001029017 A1	Cont of	US 1999-329318	19990610
	Cont of	US 2000-522465	20000309
	Cont of	US 2000-666883	20000920
		US 2001-790872	20010223

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 2001029017 A1	Cont of	US 6093370
	Cont of	US 6218126

PRIORITY APPLN. INFO: JP 1999-18004 19990127; JP 1998-163213 19980611; JP 1998-330536 19981120; JP 1998-364059 19981222

AB US2001029017 A UPAB: 20011227

NOVELTY - Separating (M) a polynucleotide from a sample solution (SS) involves immobilizing independent split areas on a surface of a substrate (S) separately with probes (P) having different base sequences respectively, hybridizing polynucleotides in SS separately to (P), and selectively heating a specific area of (S) to allow polynucleotide complimentarily hybridized with heated (P) to liberate from (P).

DETAILED DESCRIPTION - Separating (M) a polynucleotide from a sample solution involves:

(a) immobilizing single stranded-oligonucleotide probes each having a specific base sequence to each of a number of areas, where the areas are independent and formed on the surface of a substrate;

(b) supplying a sample solution containing polynucleotides onto the substrate;

(c) heating the sample solution up to a predetermined temperature and thereafter cooling the heated solution to hybridize each of complementary polynucleotides separately to each of probes;

(d) replacing the sample solution above the substrate with a solution containing no polynucleotide; and

(e) heating the surface of the substrate at one area of the number of independent areas on the substrate up to a predetermined temperature, and thus denaturing only a polynucleotide being hybridized complimentarily to the probe immobilized on the area to extract the denatured polynucleotide.

An INDEPENDENT CLAIM is also included for a polynucleotide separation apparatus (I) comprising:

(a) a substrate having a number of independent areas, each of single stranded-oligonucleotide probes each having a specific base sequence being individually immobilized on each of the areas;

(b) a unit for supplying a sample solution containing polynucleotides onto the substrate;

(c) a unit for replacing the sample solution above the substrate with a solution containing no polynucleotide;

(d) a temperature control unit for heating the sample solution up to a predetermined temperature and a temperature control unit for heating (the sample solution) the surface of the substrate at only one area of the number of independent areas on the substrate to a predetermined temperature; and

(e) a unit for extracting the sample solution above the substrate.

USE - (M) or apparatus (I) for (M) are useful for polynucleotide separation (claimed). (M) or (I) are useful for selectively extracting a target polynucleotide (DNA or RNA) having a specific base sequence.

ADVANTAGE - (M) or apparatus (I) for (M) selectively extracts a target polynucleotide (DNA or RNA) having a specific base sequence rapidly with a high precision.

DESCRIPTION OF DRAWING(S) - The figure shows a general view of the configuration of a polynucleotide separation apparatus.

Dwg.23/32

L207 ANSWER 46 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-070877 [08] WPIDS
DOC. NO. NON-CPI: N2001-053663
DOC. NO. CPI: C2001-019737
TITLE: Holder for a fiber optic bundle comprising a base with lower and upper surfaces, and an opening.
DERWENT CLASS: A89 B04 D16 J04 S01 S03
INVENTOR(S): CHEE, M S; DICKINSON, T A; PYTELEWSKI, R J; STUELPNAGEL, J R; WANG, G G
PATENT ASSIGNEE(S): (ILLU-N) ILLUMINA INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000071992	A1	20001130	(200108)*	EN	50

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000052759	A	20001212	(200115)	
EP 1190233	A1	20020327	(200229)	EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000071992	A1	WO 2000-US13772	20000519
AU 2000052759	A	AU 2000-52759	20000519
EP 1190233	A1	EP 2000-937613	20000519
		WO 2000-US13772	20000519

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000052759	A	Based on	WO 200071992
EP 1190233	A1	Based on	WO 200071992

PRIORITY APPLN. INFO: US 1999-135089P 19990520
AB WO 200071992 A UPAB: 20010207
NOVELTY - A holder for a fiber optic bundle comprising a base with lower and upper surfaces, and an opening, is new.

DETAILED DESCRIPTION - A holder (50) comprises a base with lower and upper surfaces (spaced apart at a distance (T)), and an opening defined in the upper surface and which penetrates towards the lower surface at a depth Th (where Th is at most T). The opening has a cross-section sized to retain an end of the bundle. The bundle is retained by the holder so that its longitudinal axis is perpendicular to a plane of the first surface.

INDEPENDENT CLAIMS are also included for the following:

(1) a method of forming the holder, comprising temporarily retaining a portion of each of the bundles in a desired **array pattern**, subjecting the bundles retained to a molten material, and permitting the molten material to harden while surrounding the bundles; and

(2) a method of retaining a fiber optic bundle comprising providing a planar holder.

USE - The holder is used for a fiber optic bundle (20). It is also

used for retaining randomly ordered **microsphere** arrays, e.g. nucleic acid arrays to solutions and optical imaging systems for analysis.

ADVANTAGE - The holder ensures a proper registration relationship among the retained bundles. It can also retain adjacent bundles so that multiple bundles can be processed within one well. It protects the retained bundle end from damage and dust. It can be removed and reinserted into a docking station at various process steps, while consistently maintaining registration among the retained array of bundles.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the holder and retained fiber optic bundles.

Fiber optic bundle 20

Retained array of the bundles 20', 20''

Holder 50

Dwg.3A/9

L207 ANSWER 47 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-638369 [61] WPIDS
DOC. NO. NON-CPI: N2000-473478
DOC. NO. CPI: C2000-192058
TITLE: Detecting the presence or amount of docosahexaenoic acid in a sample, used for the diagnosis of neurological disorders such as Alzheimer's disease.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): ALLNUTT, T F C; CHEN, H; MORSEMAN, J P
PATENT ASSIGNEE(S): (MART-N) MARTEK BIOSCIENCES CORP
COUNTRY COUNT: 90
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000058734	A1	20001005	(200061)*	EN	29
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000040306	A	20001016	(200106)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000058734	A1	WO 2000-US7989	20000327
AU 2000040306	A	AU 2000-40306	20000327

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000040306	A Based on	WO 200058734

PRIORITY APPLN. INFO: US 1999-126513P 19990326

AB WO 200058734 A UPAB: 20001128

NOVELTY - Detecting the presence or amount of docosahexaenoic acid (DHA) in a sample, optionally in the presence of other fatty acids, comprising contacting a sample with a protein having differential binding specificity for DHA over other fatty acids, under DHA binding conditions, and detecting binding between DHA and the protein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a kit for detecting DHA in a sample, comprising a protein with differential binding specificity for DHA over other proteins, and means

for detecting formation of a complex of DHA and the protein; and
(2) a recombinant fusion protein comprising at least part of a fatty acid binding protein, and which specifically binds fatty acids.
USE - For detecting DHA in samples, preferably biological samples selected from microorganisms, fractions of cells, fish tissue, mammalian tissue and biological fluids (claimed). DHA may also be detected in food, or in microbial or algal lysate. The assays can be used to monitor the progress of diseases in which DHA plays a role, e.g. neurological disorders such as Alzheimer's disease, attention deficit disorder, and negative symptom schizophrenia, and other disorders such as Usher's syndrome. The assays can also be used to monitor production processes, e.g. microbial fermentations.
ADVANTAGE - The assay allows rapid quantitative detection of DHA in samples, without the need for chromatographic separation.
Dwg.0/0

L207 ANSWER 48 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-499339 [44] WPIDS
DOC. NO. CPI: C2000-149911
TITLE: Replicating a specific binding ligand probe array, comprising using a master array comprising address ligands immobilized on a support, multi-ligand conjugates and binding ligands or polymerizable groups.
DERWENT CLASS: A14 A89 B04 D16 J04
INVENTOR(S): GUIRE, P E; SWANSON, M J
PATENT ASSIGNEE(S): (SURM-N) SURMODICS INC
COUNTRY COUNT: 29
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000044939	A1	20000803	(200044)*	EN	44
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU CA JP MX					
AU 2000027378	A	20000818	(200057)		
EP 1147222	A1	20011024	(200171)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000044939	A1	WO 2000-US1944	20000127
AU 2000027378	A	AU 2000-27378	20000127
EP 1147222	A1	EP 2000-905741	20000127
		WO 2000-US1944	20000127

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000027378	A	Based on	WO 200044939
EP 1147222	A1	Based on	WO 200044939

PRIORITY APPLN. INFO: US 1999-240466 19990129
AB WO 200044939 A UPAB: 20000913
NOVELTY - A system for replicating a specific binding ligand probe array, comprising a master array comprising address ligands immobilized on a support in a **patterned array**, multi-ligand conjugates, each comprising a core attached to an address ligand specific binding domain, a target ligand binding array and at least one binding ligand or polymerizable group, and an assay array support, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) replicating a specific binding ligand probe array, comprising:

(a) providing a master array, comprising a support surface having address ligands immobilized on it;

(b) providing multi-ligand conjugates, each comprising a core attached to an address ligand specific binding domain, a target ligand binding array and at least one binding ligand or polymerizable group;

(c) attaching the conjugates to the master array by allowing the specific binding domains to bind to complementary address ligands;

(d) providing an assay array support;

(e) bringing the support into contact with the master array, to permit the attached multi-ligand conjugates to attach to the support; and

(f) disassociating the bound complementary address ligand and binding domain under conditions to permit the support to be recovered and used; and

(2) a system for preparing a replicable assay, in the form of a reusable array, comprising:

(a) a master array comprising optical fibers, each having a support surface located at their distal end; and

(b) oligonucleotide binding domains, each comprising a sequence specific for a target ligand.

USE - The system is used as a replicable nucleic acid probe array (claimed).

ADVANTAGE - The novel array provides a higher nucleic acid probe density than commercial approaches using photolithography. The array also provides improved assay specificity, by using oligonucleotides that are longer, and hence more specific, than those available through photolithography. The cost of preparing the master array is reduced by using patterned deposition and immobilization of address oligonucleotide sequences.

Dwg.0/0

L207 ANSWER 49 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-387655 [33] WPIDS
DOC. NO. NON-CPI: N2000-290214
DOC. NO. CPI: C2000-117672
TITLE: Novel nucleic acid **dipstick** device for detecting nucleic acid in plant or animal sample for diagnosing tuberculosis, cardiovascular disease, gonorrhea and for detecting herpes virus, human immunodeficiency virus.
DERWENT CLASS: A96 B04 D16 S03
INVENTOR(S): BOYCE-JACINO, M; KUNKEL, M A
PATENT ASSIGNEE(S): (ORCH-N) ORCHID BIOSCIENCES INC; (ORCH-N) ORCHID BIOCOMPUTER INC
COUNTRY COUNT: 87
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000029112	A1	20000525	(200033)*	EN	59
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 2000018217	A	20000605	(200042)		
EP 1131159	A1	20010912	(200155)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000029112	A1	WO 1999-US27347	19991118
AU 2000018217	A	AU 2000-18217	19991118
EP 1131159	A1	EP 1999-961699	19991118
		WO 1999-US27347	19991118

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000018217	A	Based on	WO 200029112
EP 1131159	A1	Based on	WO 200029112

PRIORITY APPLN. INFO: US 1998-195370 19981118

AB WO 200029112 A UPAB: 20000712

NOVELTY - Device (10) (I) for detecting a nucleic acid in a sample, comprising a reaction chamber (28) having reagents (30) pre-deposited for preparation of the sample and a movable membrane (24) situated within the reaction chamber having reagents pre-deposited for processing of the sample, is new.

USE - The device is useful for detecting nucleic acid in a sample obtained from plant or an animal. Detection of nucleic acid serves as an indicative of the presence of a disease, disorder selected from tuberculosis, gonorrhea, acquired immunodeficiency syndrome and cardiovascular disease or an organism preferably herpes virus, Neisseria gonorrhea, human immunodeficiency virus, Epstein Barr virus, Helicobacter pylori, Haemophilus influenzae or Mycoplasma genitalium (claimed).

ADVANTAGE - The device provides one-step sample preparation, processing, analysis and is suitable for use outside a controlled laboratory arrangement and requires no specialized skills to operate.

DESCRIPTION OF DRAWING(S) - The figure shows the nucleic acid **dipstick** device.

One-step device 10
Membrane positioner 12
Pressure regulator 14
Absorbent material 16
Positive control site 18
Membrane bound probes 20
Probe markers 22
Movable membrane 24
Reagent carrier 26
Reaction chamber 28
Reagent for sample preparation 30
Fluid transfer tube 32
Micro-well PCR adaptor 34
Aspiration tube 36

Dwg.1/4

L207 ANSWER 50 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-053120 [04] WPIDS
DOC. NO. NON-CPI: N2000-041379
DOC. NO. CPI: C2000-013819
TITLE: Enumeration assay method in analyte detection for immunoassay, DNA probe techniques.
DERWENT CLASS: B04 D16 J04 S03
INVENTOR(S): CLARK, S; ROBINSON, M; STARZL, T W
PATENT ASSIGNEE(S): (DDXD-N) DDX INC; (ACCE-N) ACCELR8 TECHNOLOGY CORP
COUNTRY COUNT: 81
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9958948	A2	19991118	(200004)*	EN	66

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

AU 9941900	A	19991129	(200018)	
EP 1188059	A2	20020320	(200227)	EN

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9958948	A2	WO 1999-US10917	19990513
AU 9941900	A	AU 1999-41900	19990513
EP 1188059	A2	EP 1999-925655	19990513
		WO 1999-US10917	19990513

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9941900	A	Based on	WO 9958948
EP 1188059	A2	Based on	WO 9958948

PRIORITY APPLN. INFO: US 1998-85259P 19980513

AB WO 9958948 A UPAB: 20000502

NOVELTY - The method involves immobilizing an analyte complex comprising a target analyte complexed with a signal generator conjugated to a secondary analyte specific binding element, on a reflective or transmissive substrate. Electromagnetic radiation reflected or transmitted from or through the **substrate** is **captured** and analyzed for the presence and amount of analyte.

DETAILED DESCRIPTION - The analyte complex is immobilized by covalent, steric, adsorptive, chemically mediated, linker, self assembling or force mediated binding to a solid phase or solid phase matrix. One or more of intermediate layers are disposed between the substrate and the analyte complex during immobilization. The target analyte which is complexed in liquid phase or solid phase is separated from other materials via immobilization. The signal generator is selected from the group consisting of self assembling, aggregating, enzymatic, chemically active, film forming and optically active materials and from the group consisting of **microparticles**, colloidal metals or non- metals, polymers, glass, silial compounds, macro molecules and nucleic acid etc. The signal generator element adds mass to the analyte complex. A plurality of signal generator elements are complexed with the analyte complex creating a plurality of distinct signals indicative of distinct binding events. The secondary binding element is selected from the group consisting of antibodies, antigens, macromolecules, nuclei acid and specific binding molecules. The electromagnetic radiation source used is a laser diode. AN INDEPENDENT CLAIM is also included for a system for solid phase, optical detection and enumeration of target analyte individual binding events. The system has the substrate upon which the analyte complex is immobilized. A signal carrier which is a laser diode has a known interaction with the signal generator and generates a detectable signal evidencing analyte binding events. The signal carrier produces electromagnetic radiation which has a monochromatic wavelength within the range of 400-700 nm or a multiple wavelength within the range of 400-700 nm. The signal carrier is selected from the group consisting

of interference, diffraction, reflection, polarization, scattering, birefringence, absorption and refraction. A signal capture unit or signal detector having an optical resolution element or elements is configured to receive information generated from the signal carrier. The resolution element magnifies, focuses and controls the signal carrier unit and passes discrete signals from an aggregate signal generated from the signal generator. The analyte complex can be added with mass enhancement agents for amplifying a signal for detection related to the presence of the target analyte.

USE - To detect analytes and individual binding events for immunoassay, DNA probe and immuno-chromatographic detection methodologies, for detection of specific molecules in samples such as biological samples derived from agriculture sources, bacterial and viral sources, human or other animal sources, samples such as waste or drinking water, agricultural products, processed foodstuff and air etc and for protein binding assay, hybridization assay, enzyme activity assay; for the detection of low numbers of micro organisms etc; for pharmaceutical screening.

ADVANTAGE - The method enables determination of low levels of analyte concentration since an intrinsically digital measurement scheme is adapted for individual binding event detection. The digital methodology enables detection of single molecules in a sample and eliminates the need for calibration curve references. The method is useful for the solid phase detection of biological markers where the frequency, density or distribution of binding events is below the detectable threshold of normally employed immunoassay, DNA probe and immuno- chromatographic detection methodologies. The method enables to detect low concentrations of analyte, generally at picomolar or femtomolar or less. The system is used for assays utilizing either the addition of mass or removal of mass and is applicable to assays measuring mass change. The method is applicable to both transmission and reflection based solid phase assays. The method enables alteration of the ratio of signal to non-signal surface area, allowing for more sensitive results. Specific labels are selected to interact with specific optical beam types to create an enhanced, differentiable or amplified signal. Since the method allows for extremely sensitive assay procedures, time consuming culture steps are eliminated in microbiological assays and cumbersome amplification techniques such as PCR, NASBA, SDA are eliminated. Rapid parallel signal processing can be employed.

Dwg.0/15

L207 ANSWER 51 OF 51 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1995-005461 [01] WPIDS
CROSS REFERENCE: 1996-127999 [13]
DOC. NO. NON-CPI: N1995-004549
TITLE: **Patterned array** of uniform metal **microbeads** - forms metal layer on substrate, which is partitioned into metal regions then contacting metal layer with effective amount of fluxing agent.
DERWENT CLASS: P55 U11
INVENTOR(S): CALHOUN, C D; KOSKENMAKI, D C
PATENT ASSIGNEE(S): (MINN) 3M CO; (MINN) MINNESOTA MINING & MFG CO
COUNTRY COUNT: 22
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5366140	A	19941122	(199501)*		11
WO 9509436	A1	19950406	(199519)	EN	
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: CA CN JP KR					
EP 721659	A1	19960717	(199633)	EN	11
R: DE FR GB IT					

JP 09503100 W 19970325 (199722) 24
CN 1132570 A 19961002 (199802)
MX 188467 B 19980331 (200045)
EP 721659 B1 20001102 (200056) EN
R: DE FR GB IT
DE 69426237 E 20001207 (200103)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5366140	A	US 1993-129668	19930930
WO 9509436	A1	WO 1994-US9507	19940824
EP 721659	A1	EP 1994-926565	19940824
		WO 1994-US9507	19940824
JP 09503100	W	WO 1994-US9507	19940824
		JP 1995-510302	19940824
CN 1132570	A	CN 1994-193577	19940824
MX 188467	B	MX 1994-7087	19940914
EP 721659	B1	EP 1994-926565	19940824
		WO 1994-US9507	19940824
DE 69426237	E	DE 1994-626237	19940824
		EP 1994-926565	19940824
		WO 1994-US9507	19940824

FILING DETAILS:

PATENT NO	KIND		PATENT NO
EP 721659	A1	Based on	WO 9509436
JP 09503100	W	Based on	WO 9509436
EP 721659	B1	Based on	WO 9509436
DE 69426237	E	Based on	EP 721659
		Based on	WO 9509436

PRIORITY APPLN. INFO: US 1993-129668 19930930
AB US 5366140 A UPAB: 20010116
The method involves providing a metal layer on a substrate, the metal layer sufficiently partitioned into a number of metal regions to permit beading of the metal regions, heating the metal layer to a temp sufficient to melt the metal regions and o permit beading of the metal regions into discrete **microspheres**, thereby providing an array of discrete **microspheres** on a substrate.

The metal regions are provided by depositing the metal layer on the substrate followed by a step wherein the metal layer is partitioned into metal regions.

USE/ADVANTAGE - For making electrical connections between components often of very small scale, e.g. in computers, tape players, TV, telephones. Precise spacing of regular pattern, uniform size of **micro-beads**
Dwg.1/5

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